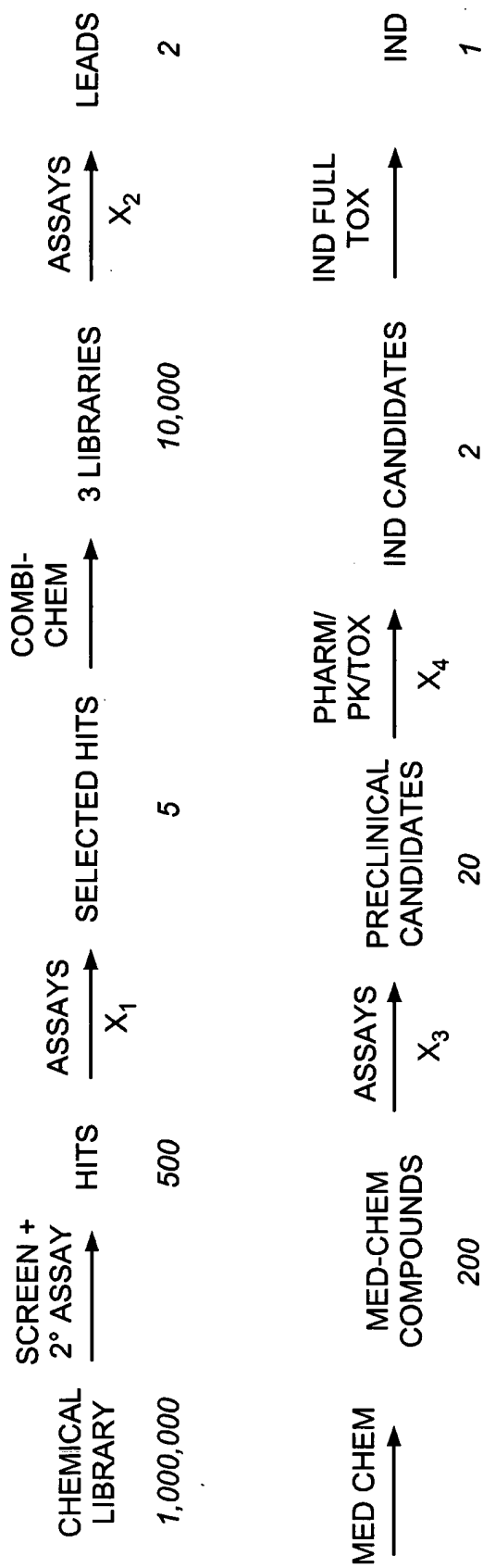


FIG. 1



PHASE 1 AND 2 SAFE AND EFFECTIVE DRUG X_5 $X_1, X_2, X_3 =$ PHYSIOCHEMICAL ANALYSIS IN VITRO TOXICOLOGY GENE EXPRESSION PROFILING

$X_4 =$ IN VIVO GENE PROFILING

$X_5 =$ SURROGATE MARKER

FIG. 2

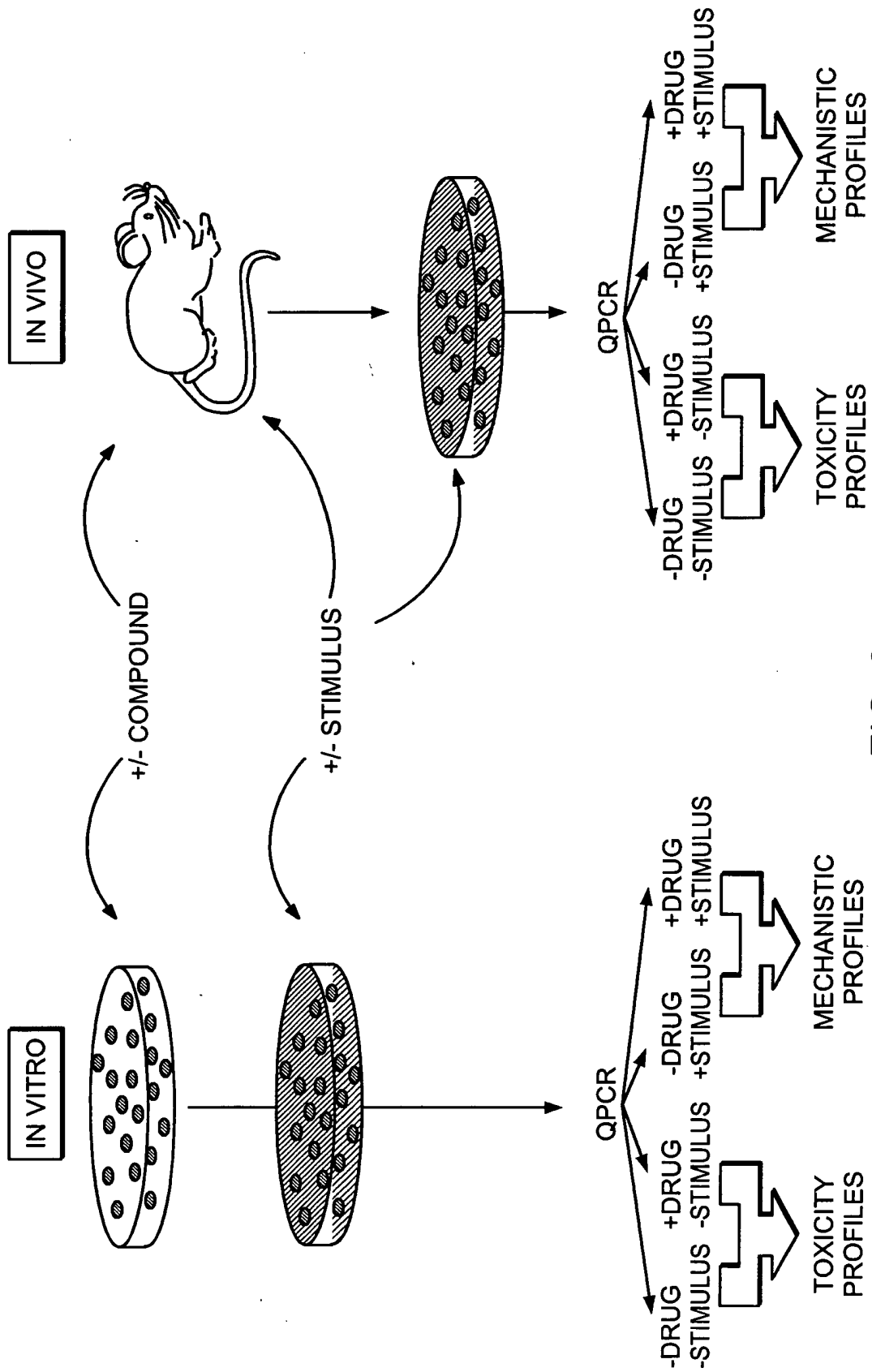


FIG. 3

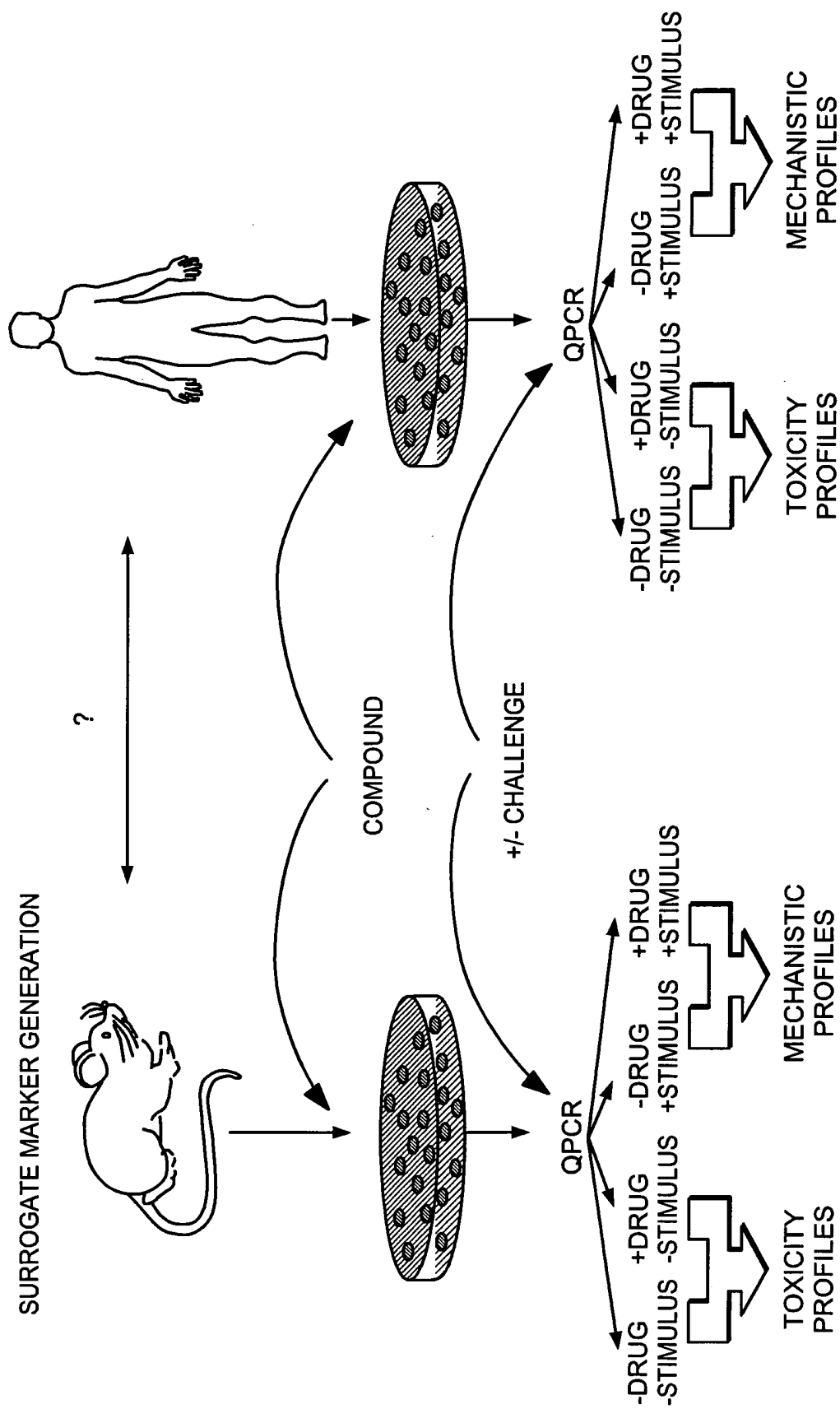


FIG. 4

PRODUCING A "CALIBRATED SELECTED PROFILE"

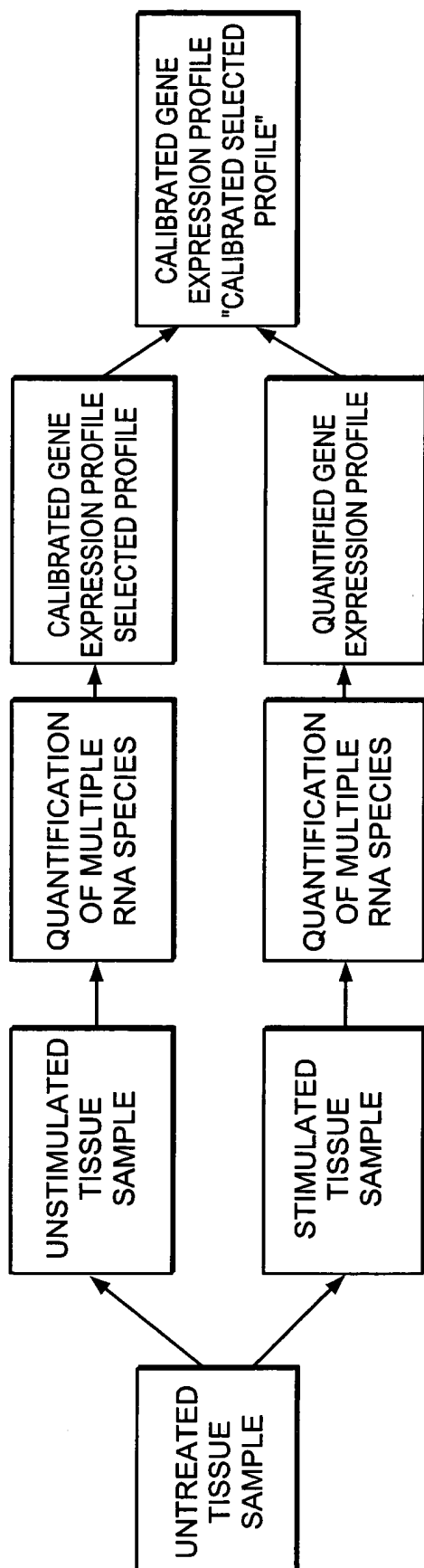


FIG. 5

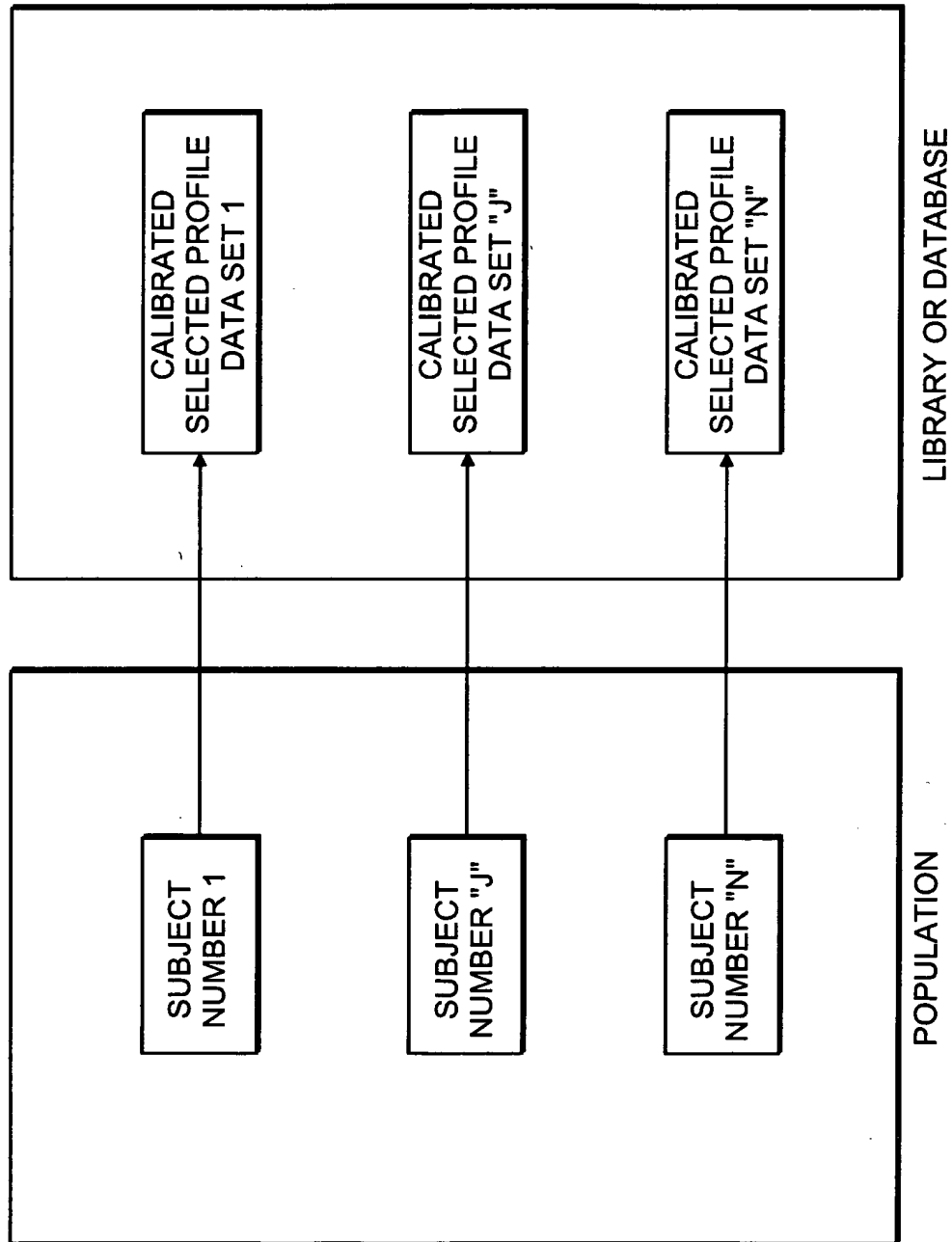
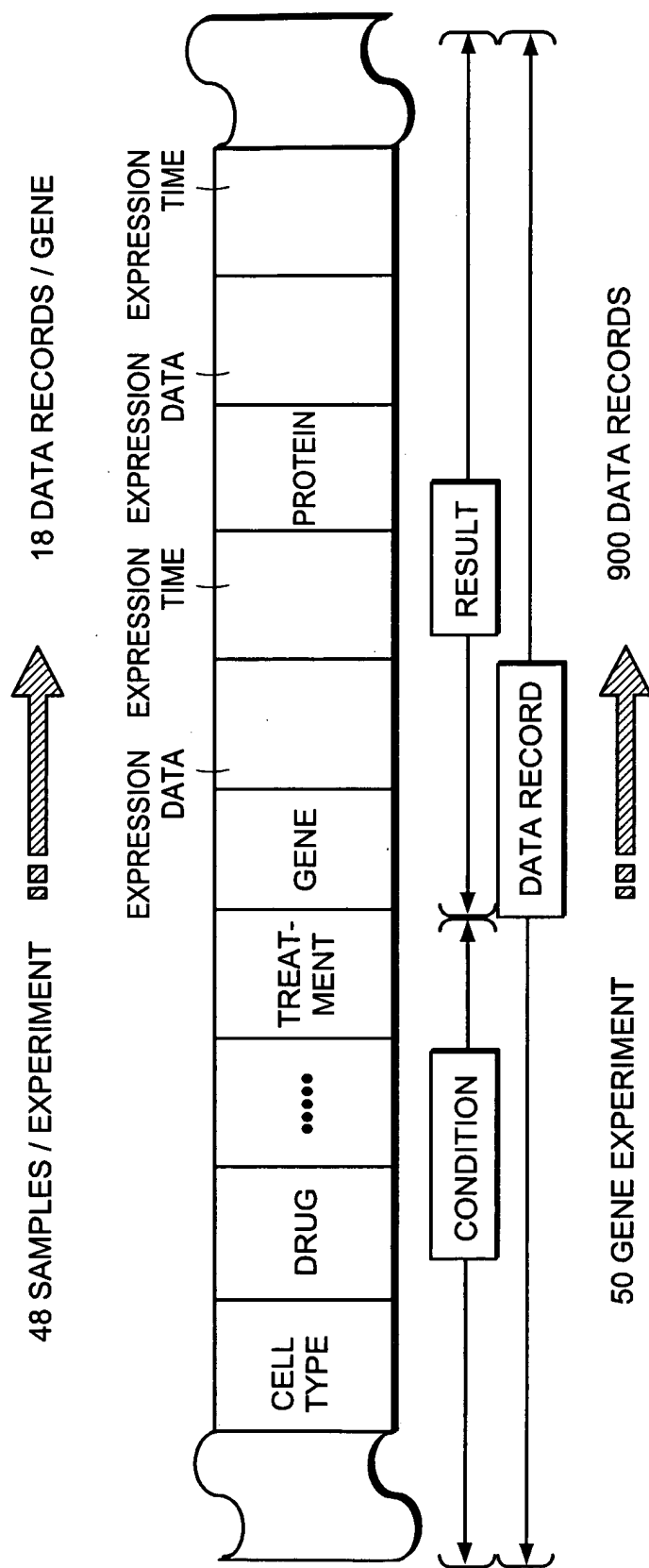


FIG. 6



EACH NEW RECORD IMPROVES THE PREDICTIVE POWER OF THE DATABASE AND INCREASES ITS VALUE

FIG. 7

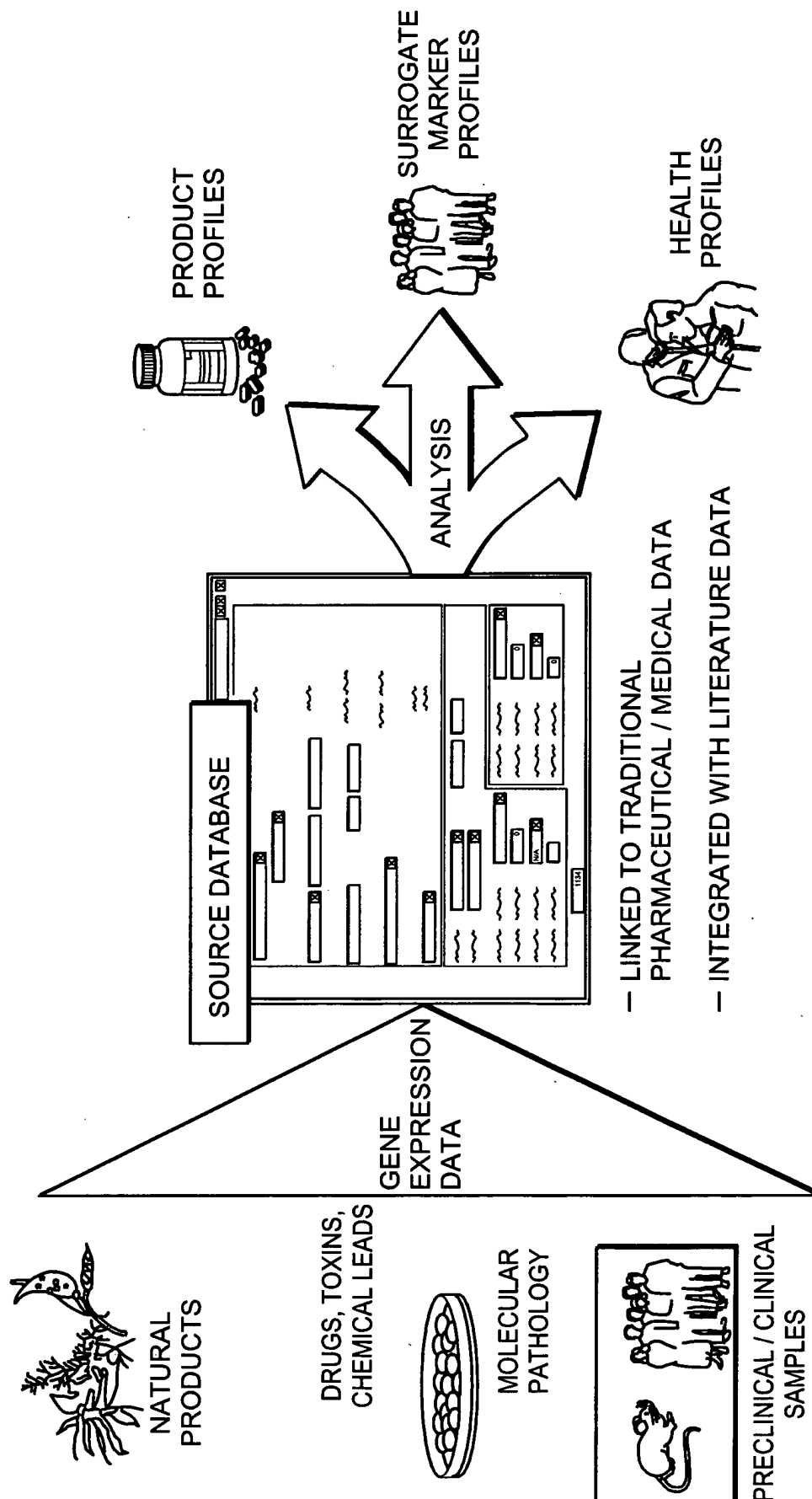


FIG. 8

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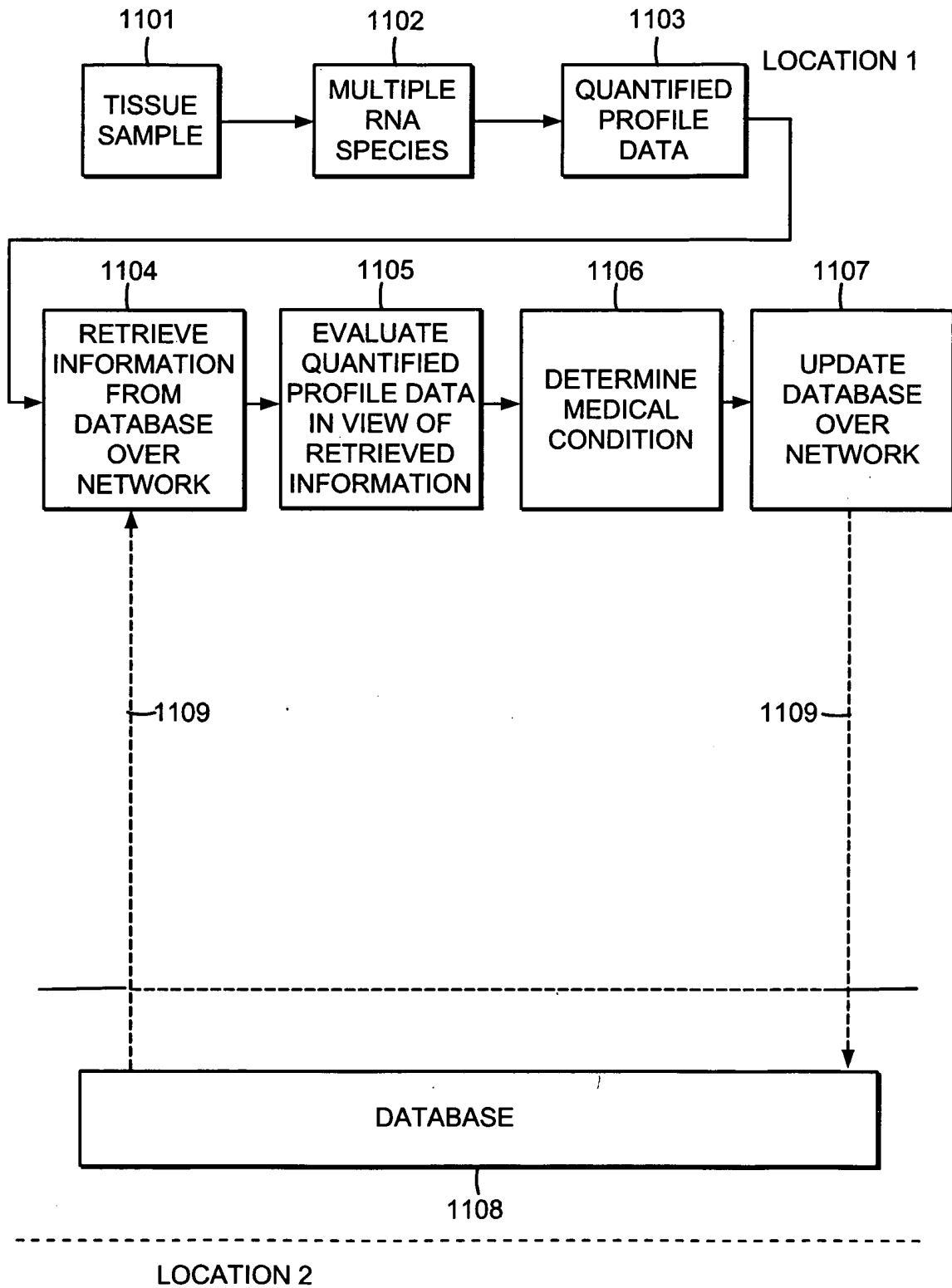


FIG. 9

PHASE TWO CLINICAL TRIAL DESIGN USING SELECTED PROFILING

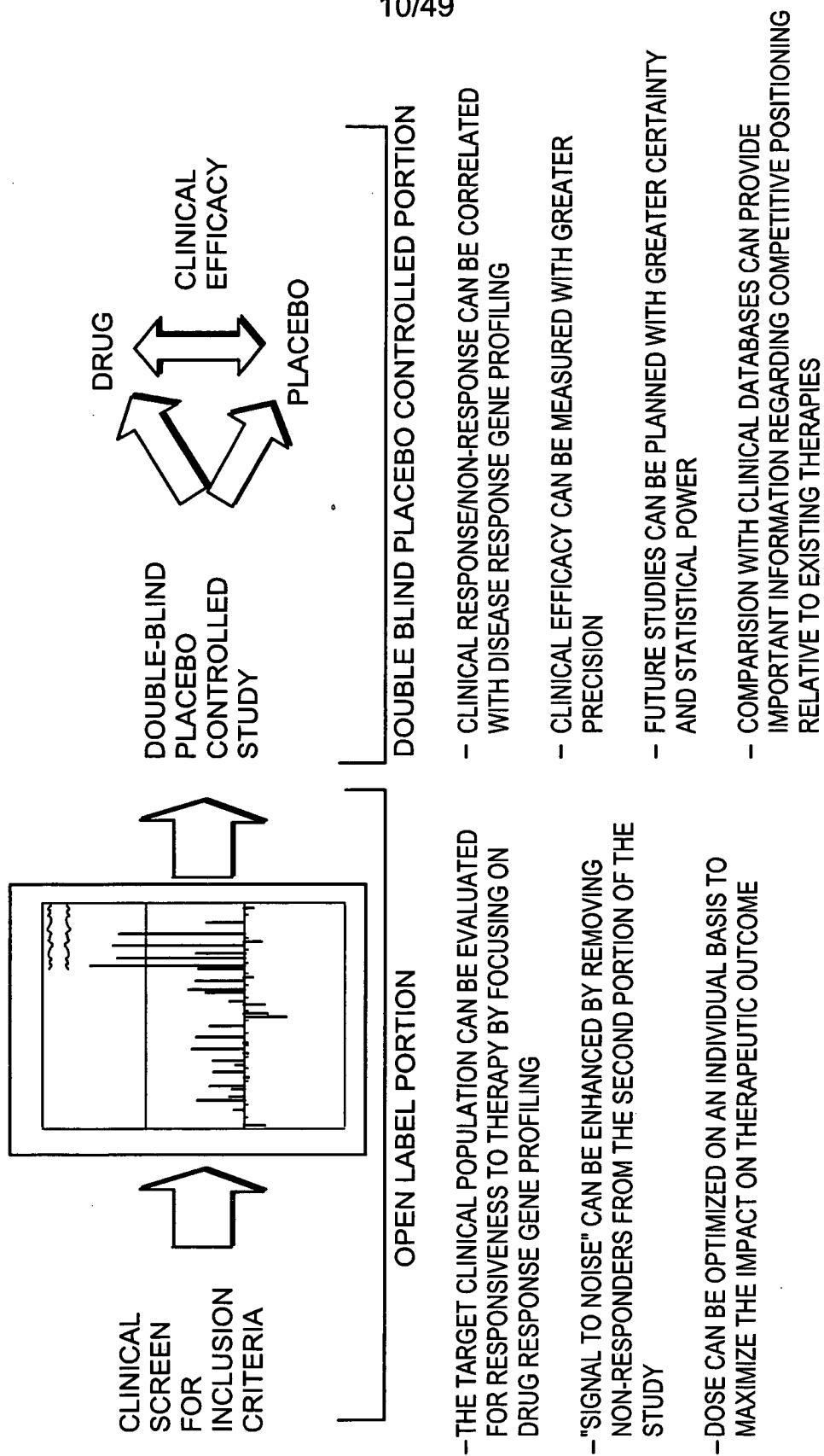


FIG. 10a

FIG. 10b

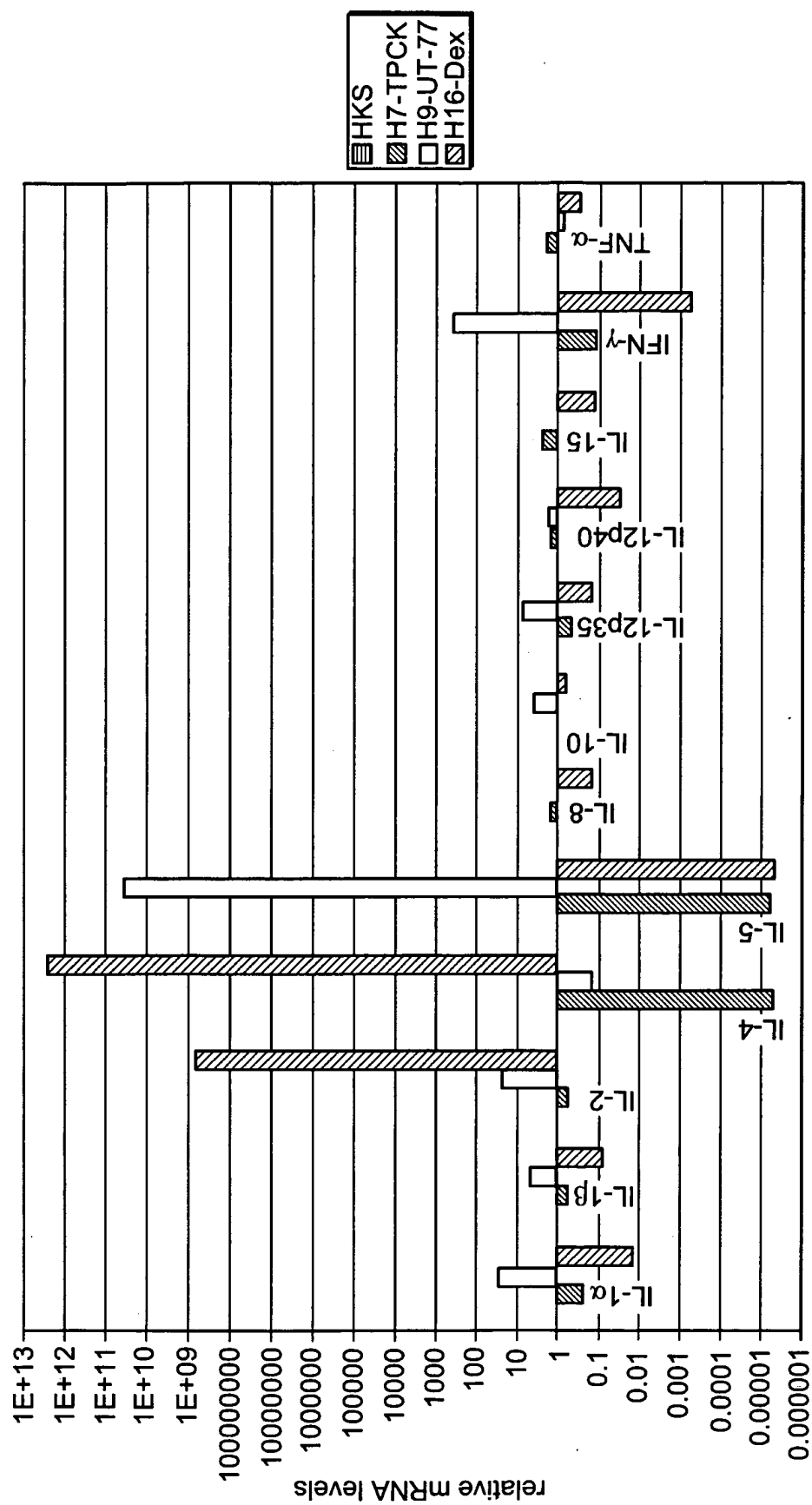


FIG. 11a

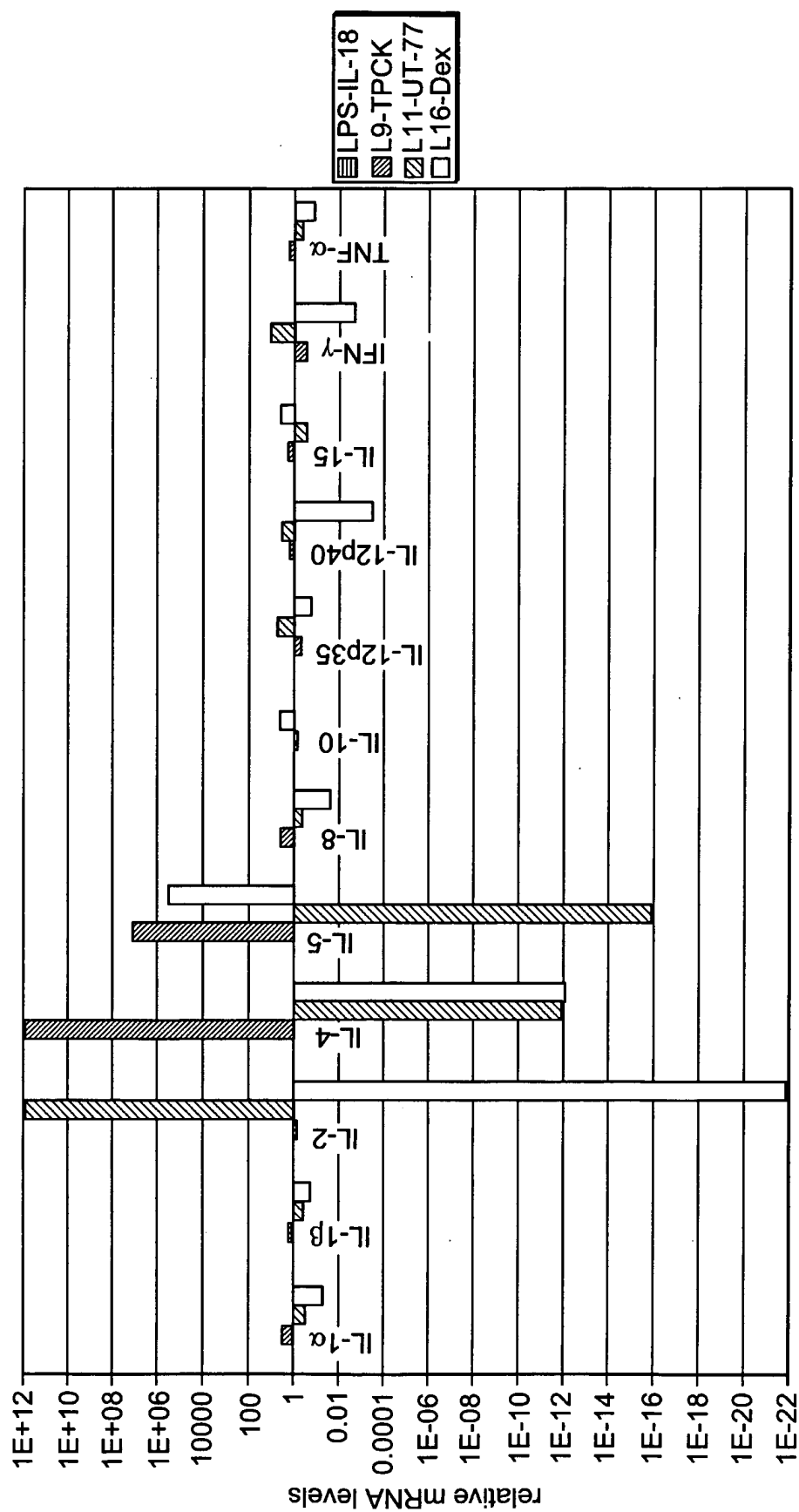


FIG. 11b

COMPARATIVE DRUG PROFILING SHOWS DIFFERENCES AMONG ANTI-INFLAMMATORY DRUGS WITH DIFFERENT MECHANISM OF ACTION

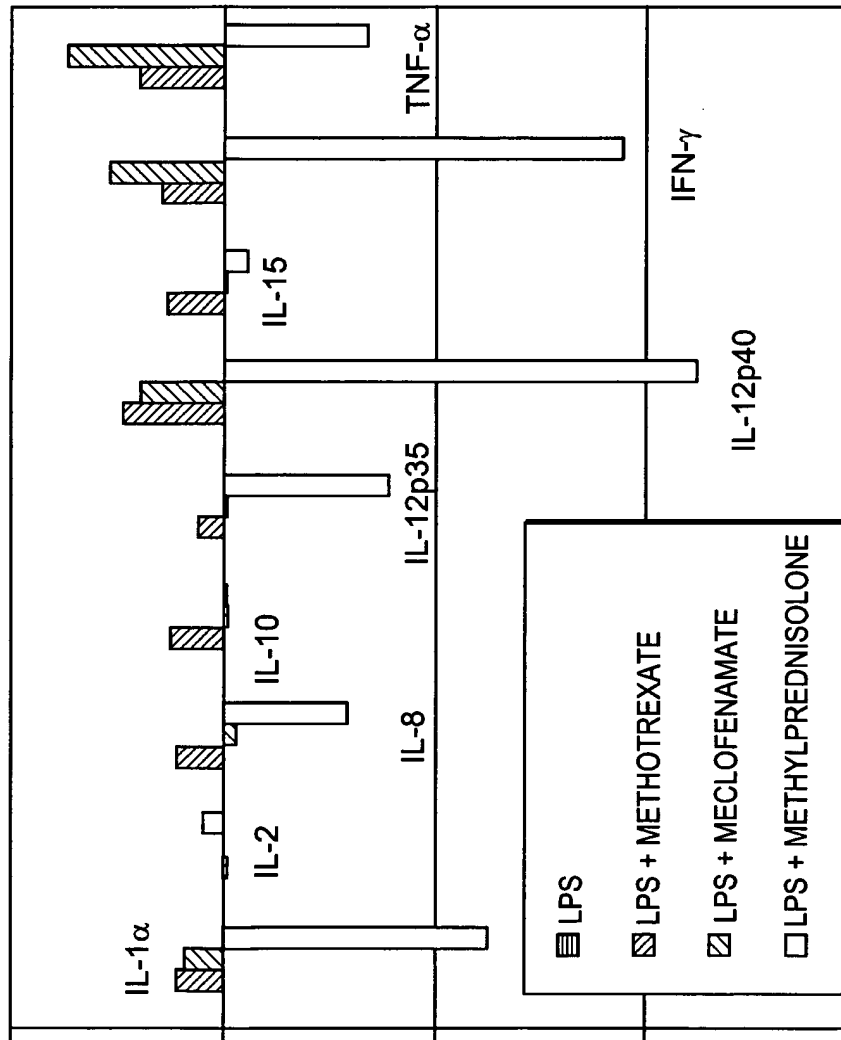


FIG. 12a

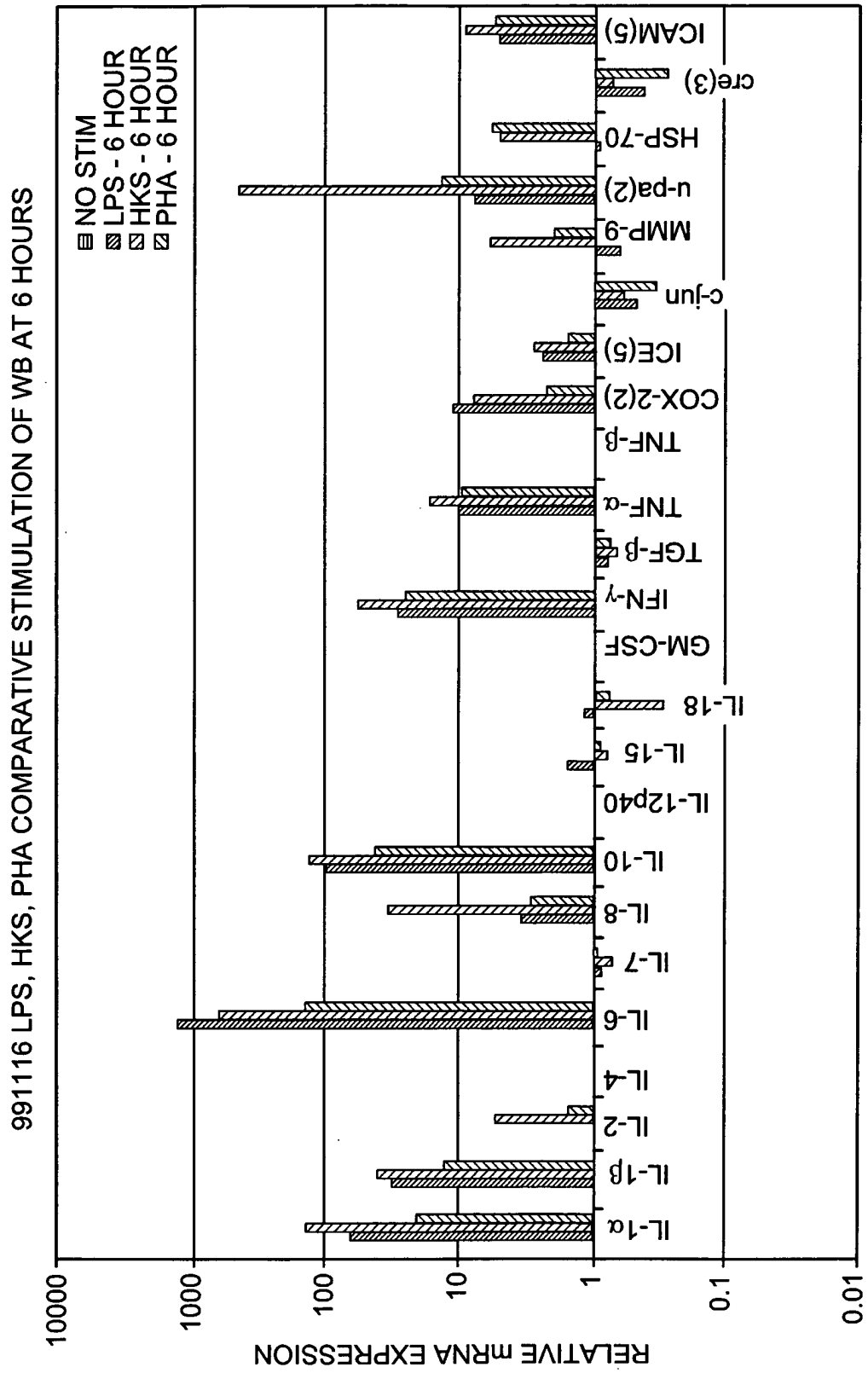


FIG. 13a

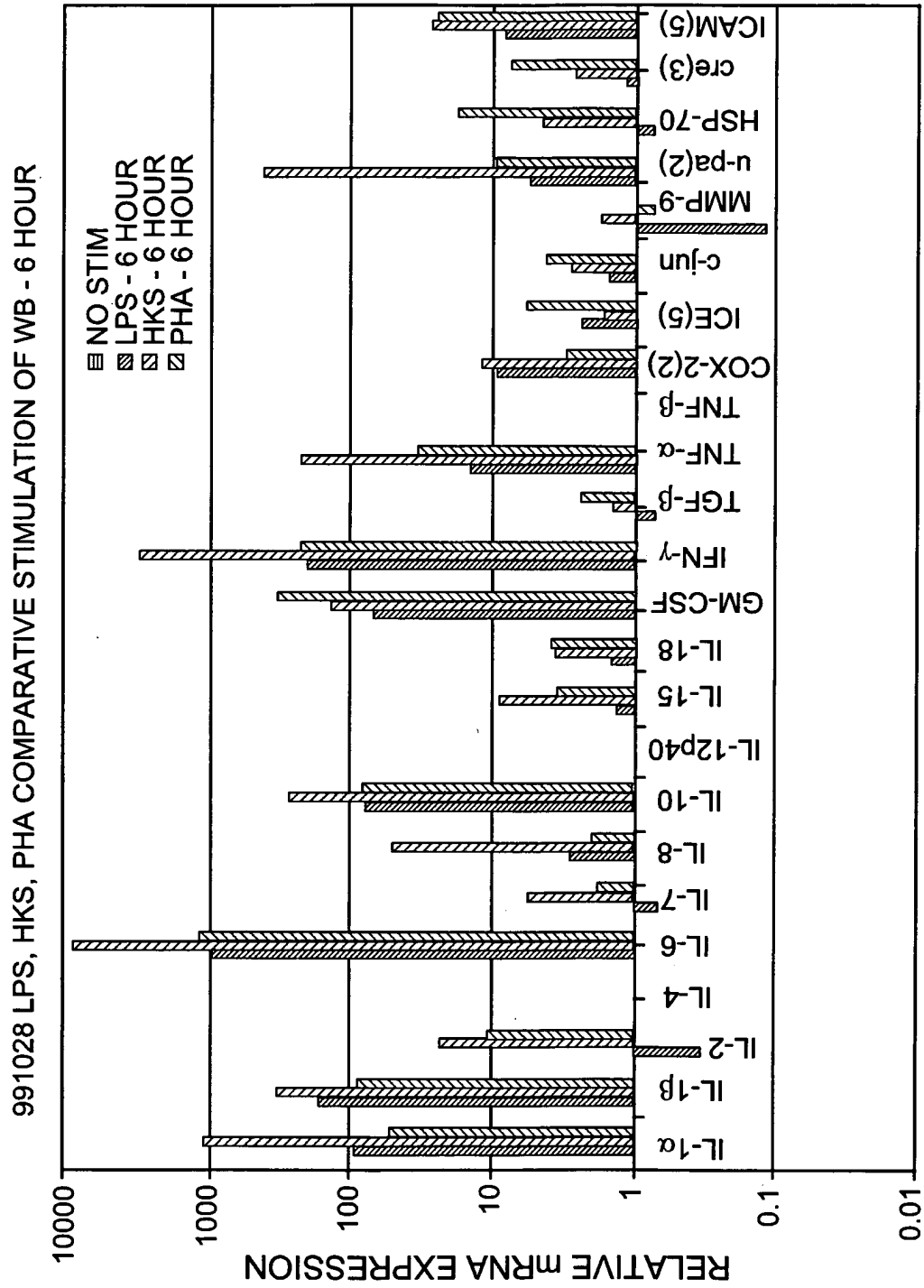


FIG. 13b

INDIVIDUAL COMPARISON OF LPS STIMULATION • 991026 VS. 991116 DONOR: TK

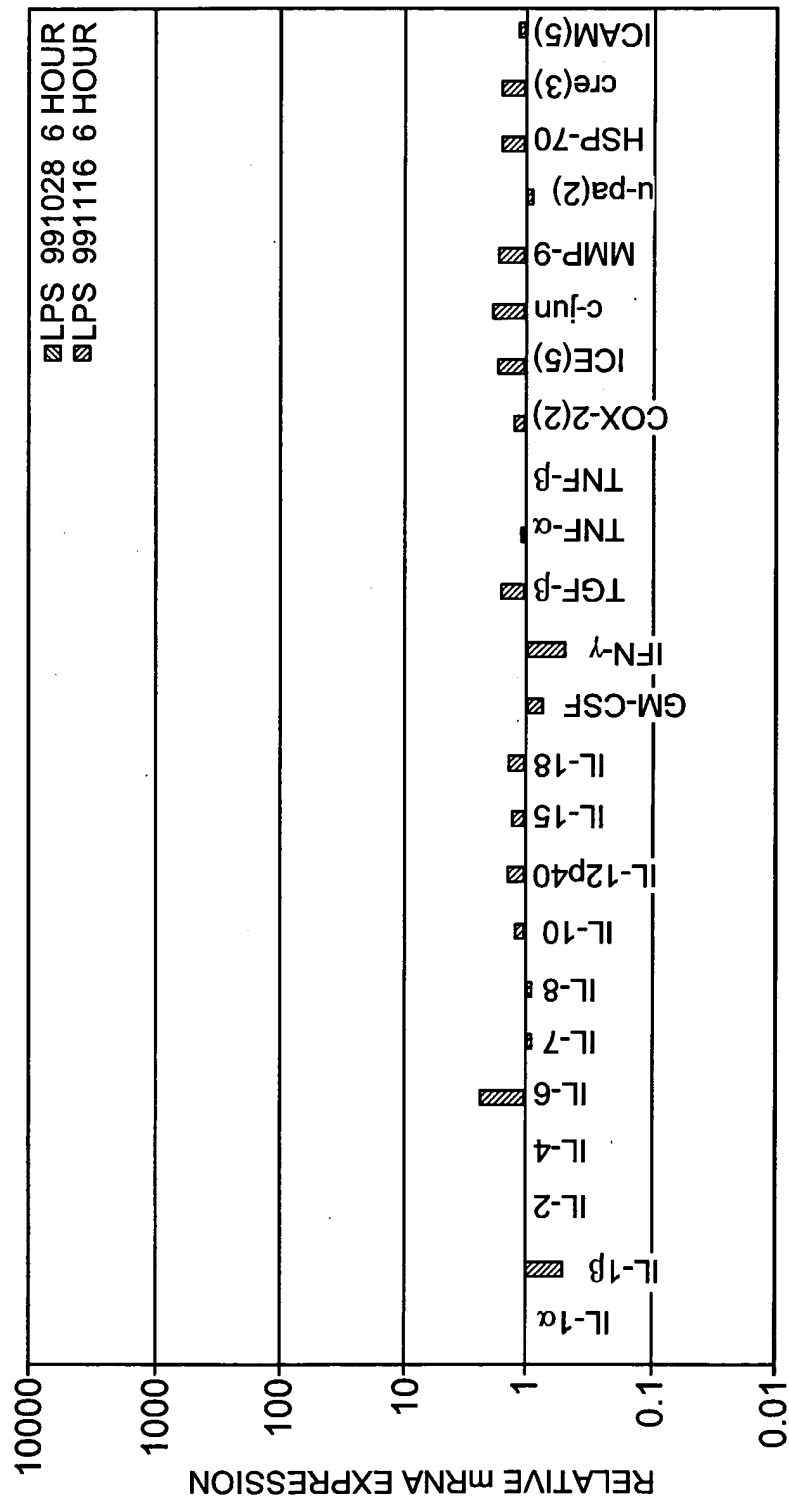


FIG. 13c

INDIVIDUAL COMPARISON OF DONOR SAMPLE WITH NO STIMULATION
6 HOUR - 991028 VS. 991116 DONOR: TK

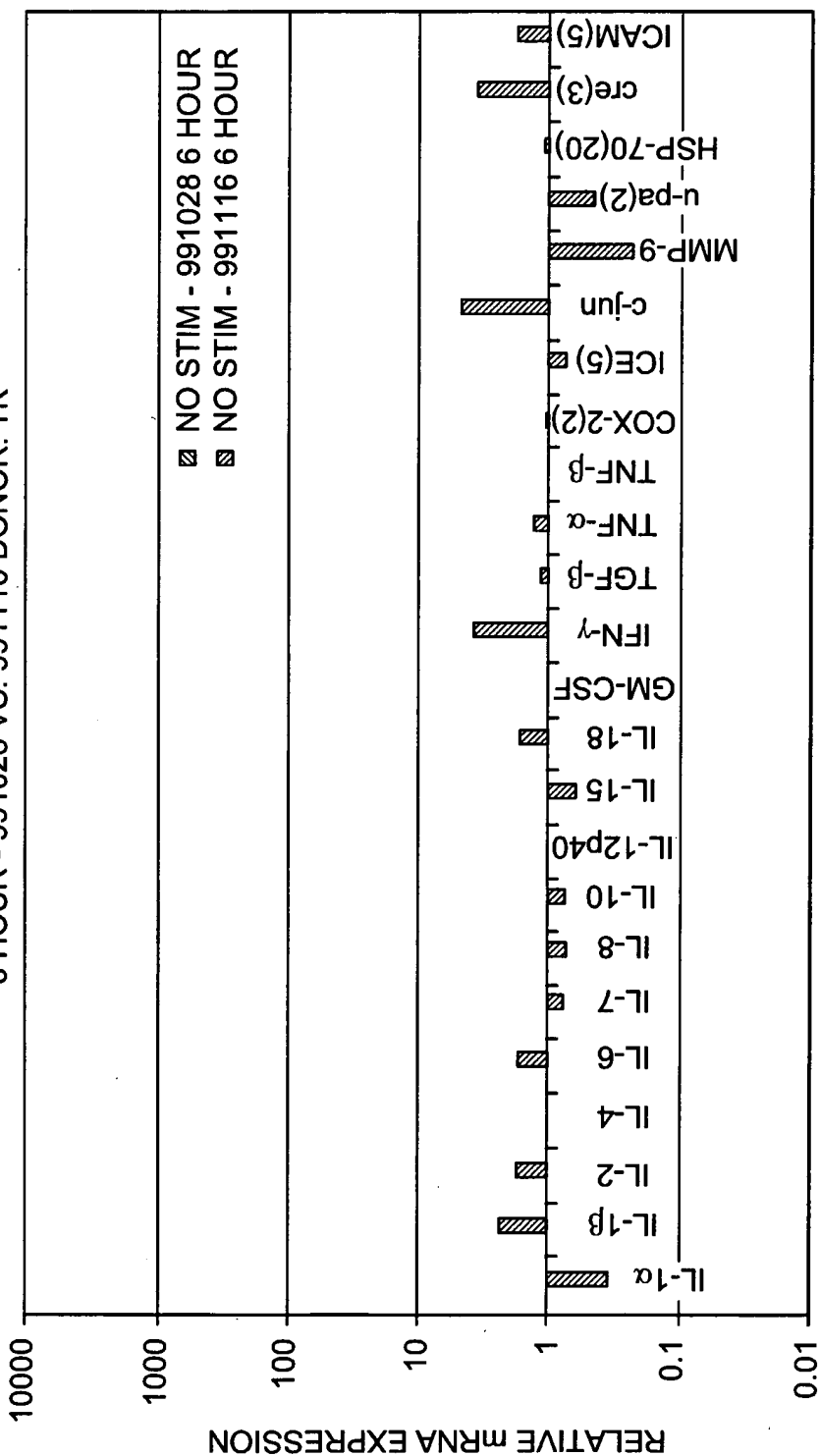


FIG. 13d

STIMULANT EFFECT ON METHYL PREDNISOLONE GENE EXPRESSION IN WHOLE BLOOD - 6 HOUR

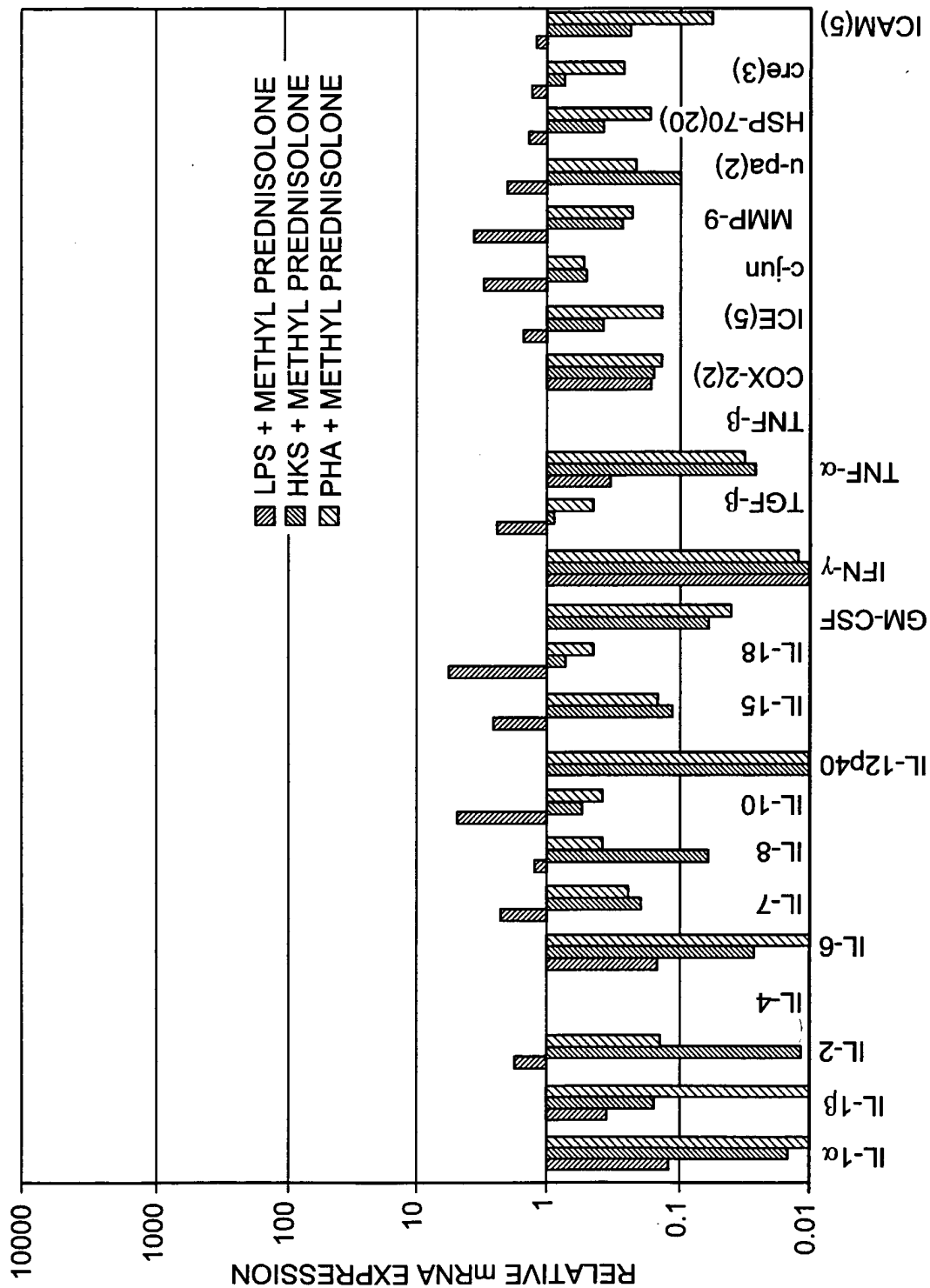
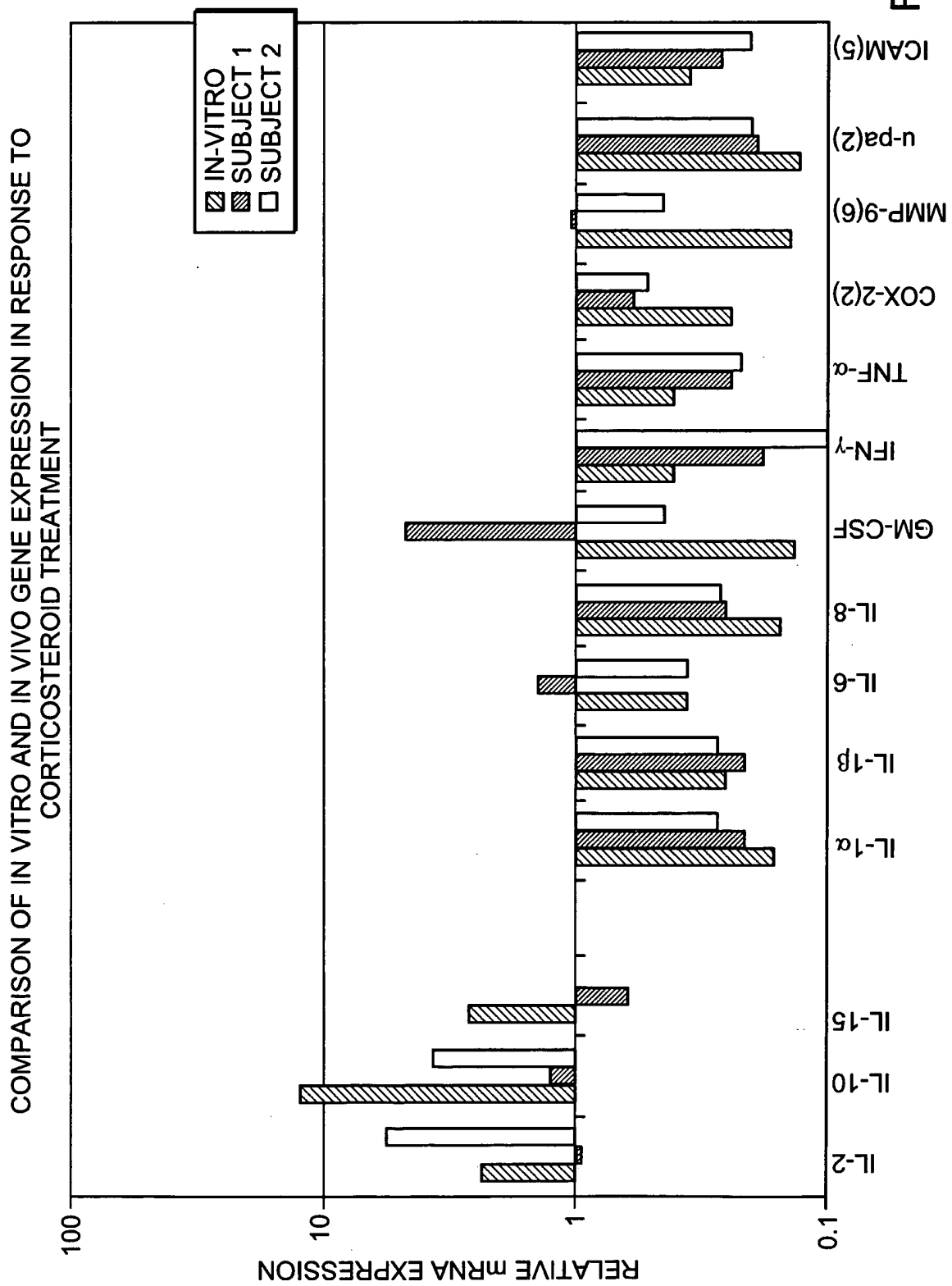


FIG. 14

FIG. 15



mRNA EXPRESSION IN WHOLE BLOOD IN RESPONSE TO *IN VIVO* PREDNISONE
100 mg/DAY X 3 DAYS (6 HR INCUBATION)

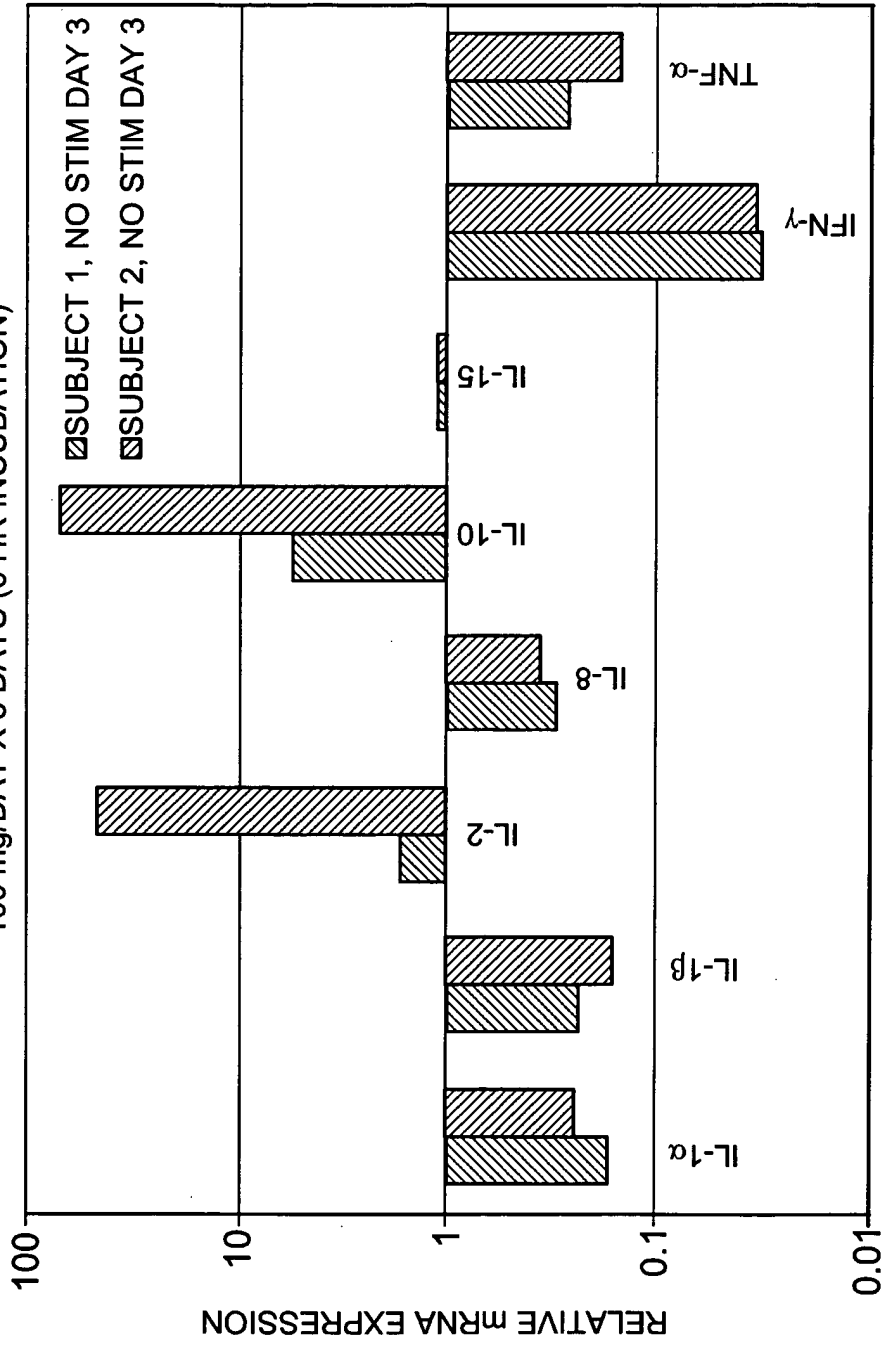


FIG. 16a

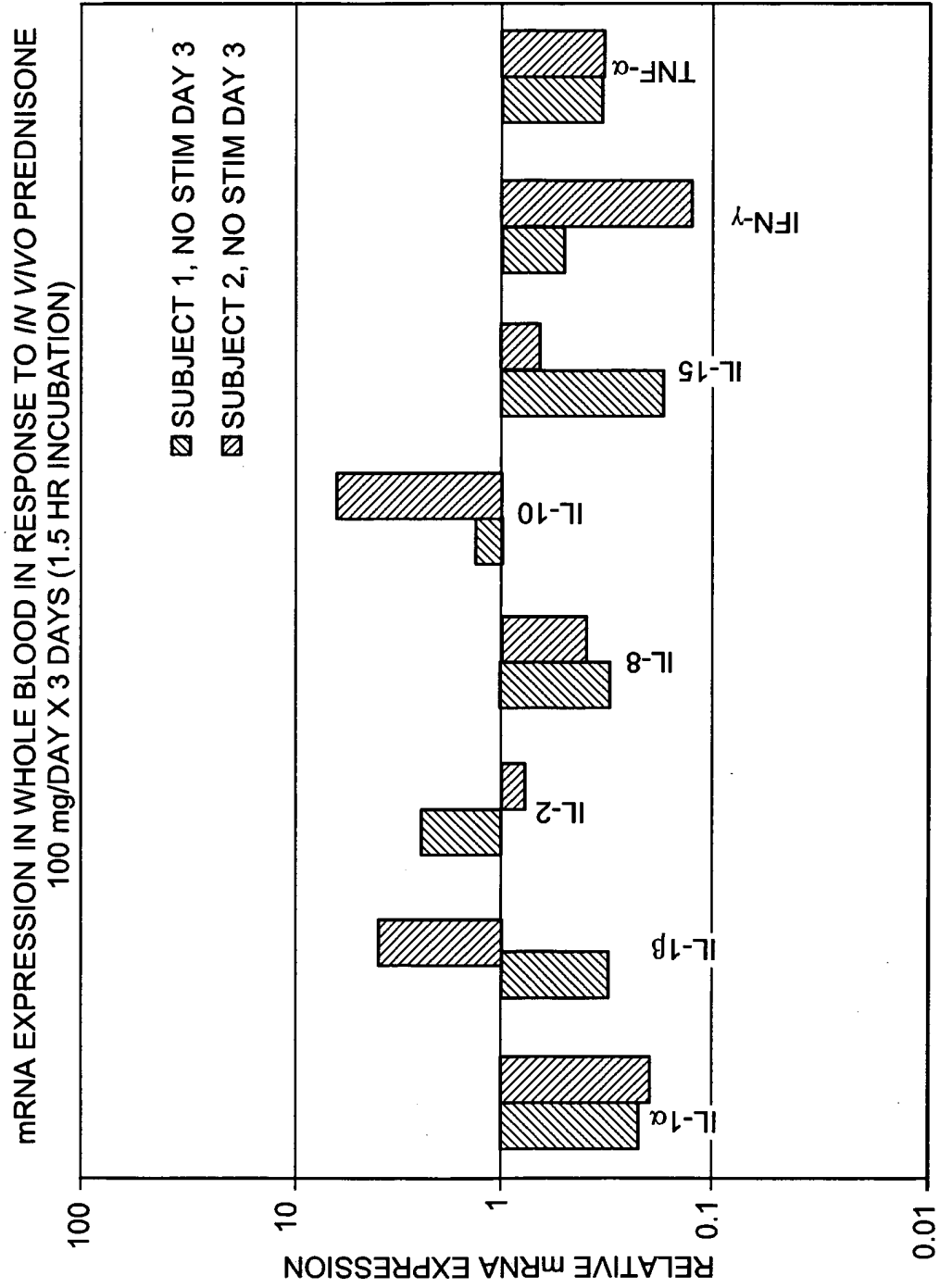


FIG. 16b

INDIVIDUAL COMPARISON - 991028 VS. 991116
DONOR: TK

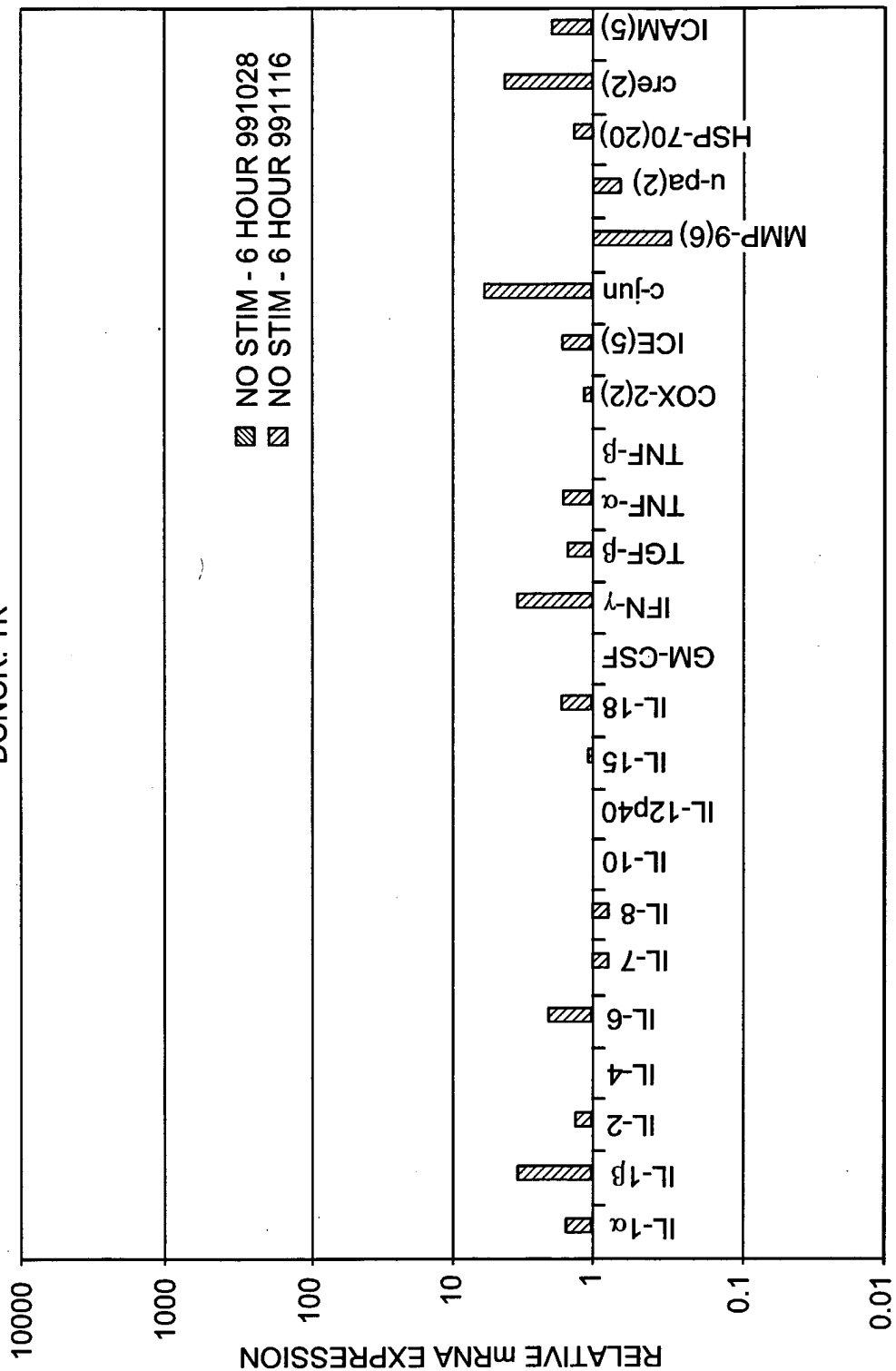


FIG. 17

PB001 STUDY 2, STAGE 3
EFFECTS OF DRUG ON WHOLE BLOOD
DONOR 1

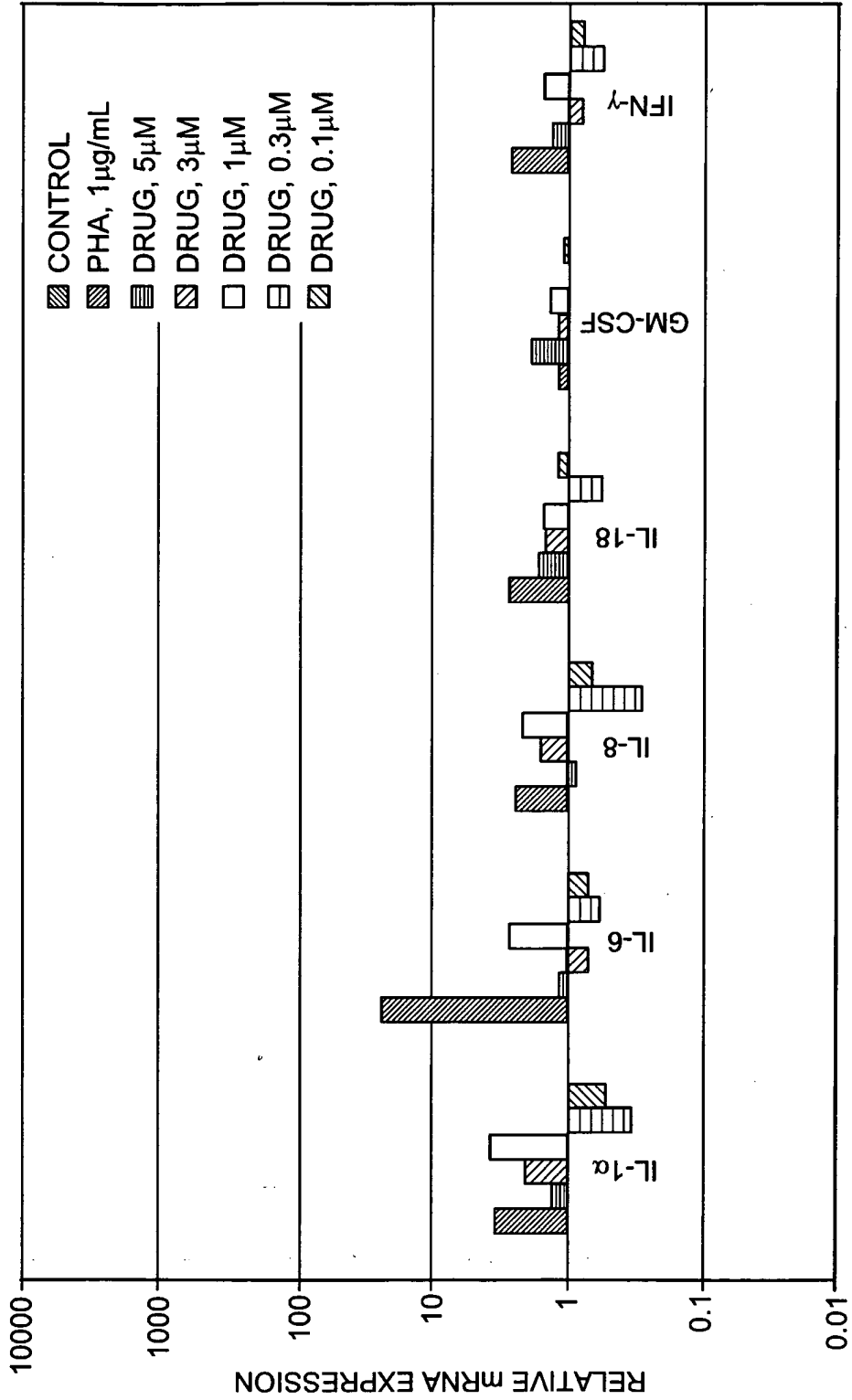


FIG. 18a

PB001 STUDY 2, STAGE 3
EFFECTS OF DRUG ON WHOLE BLOOD
DONOR 2

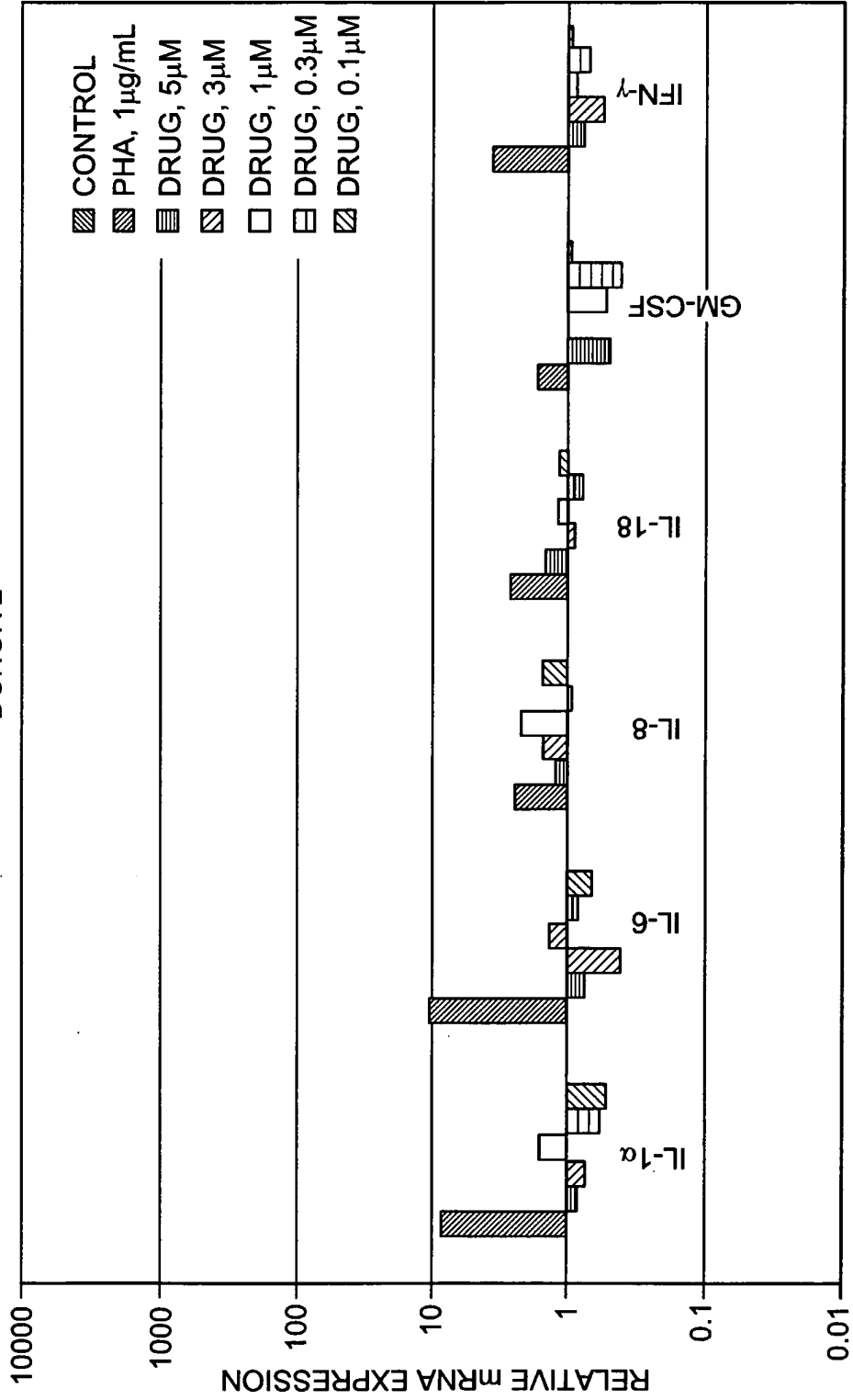


FIG. 18b

PB001 STUDY 2, STAGE 3
EFFECTS OF DRUG ON WHOLE BLOOD
DONOR 3

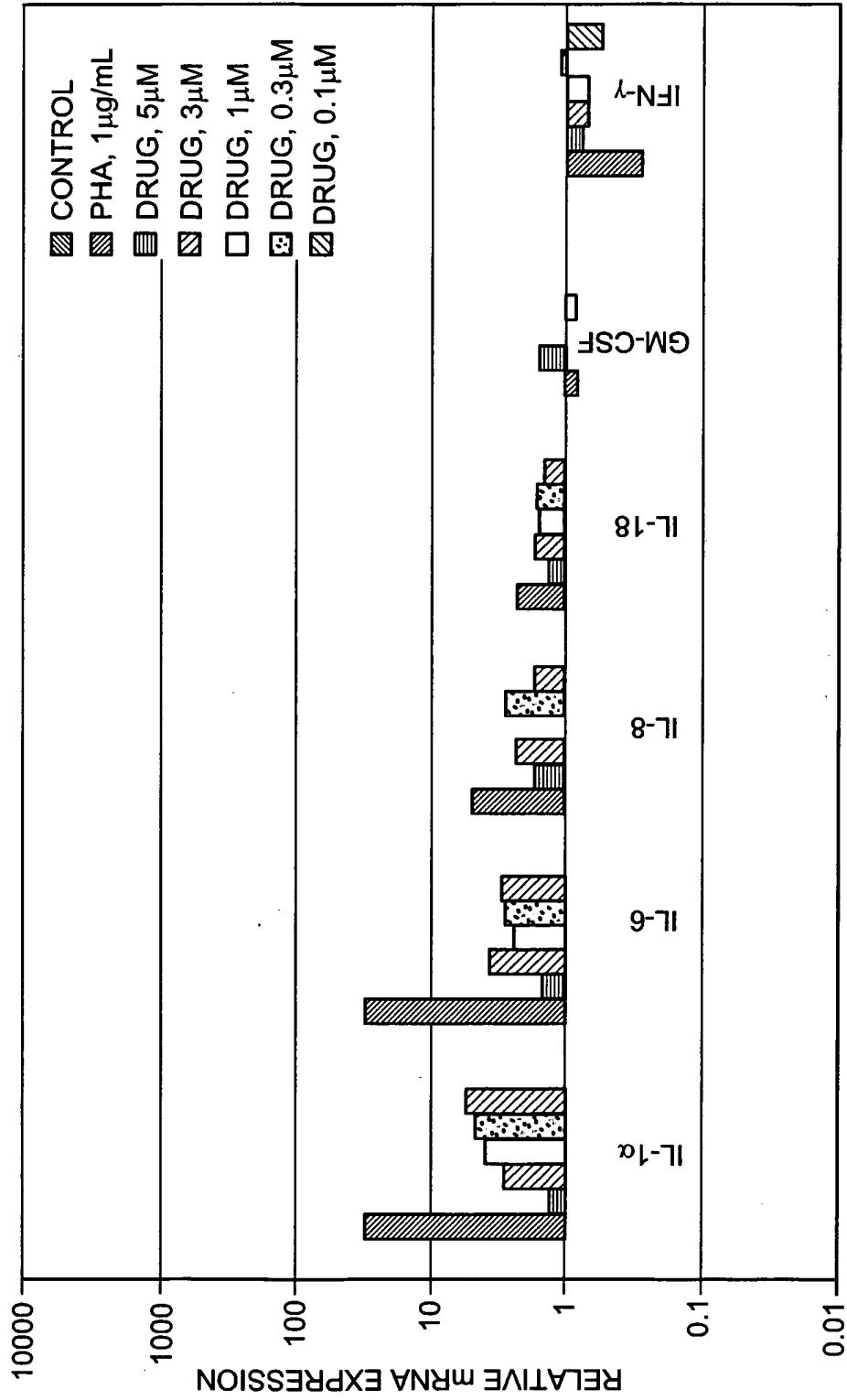


FIG. 18c

PB001 STUDY 2, STAGE 3
EFFECTS OF DRUG ON WHOLE BLOOD
DONOR 4

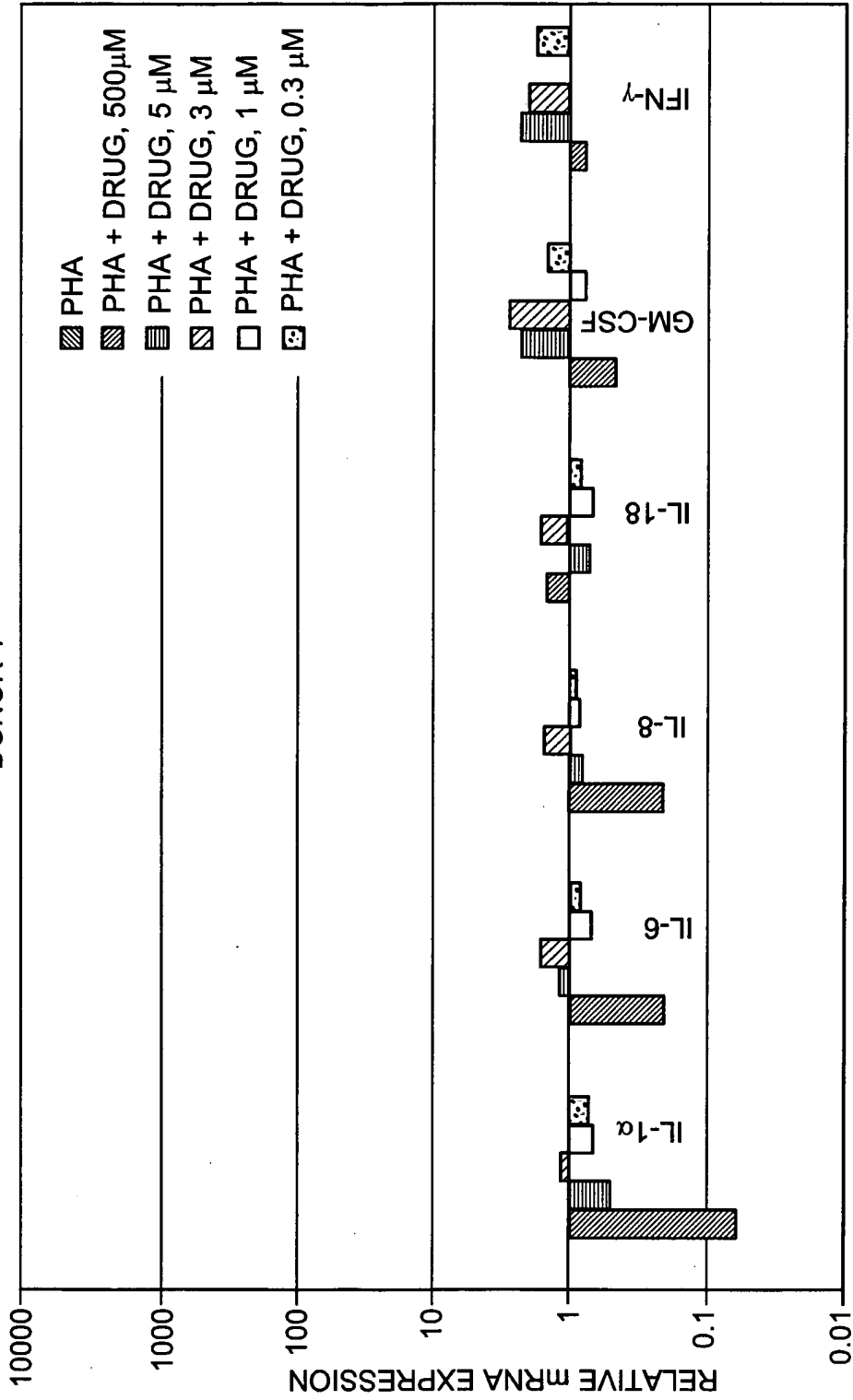


FIG. 18d

PB001 STUDY 2, STAGE 3
EFFECTS OF DRUG ON WHOLE BLOOD
DONOR 5

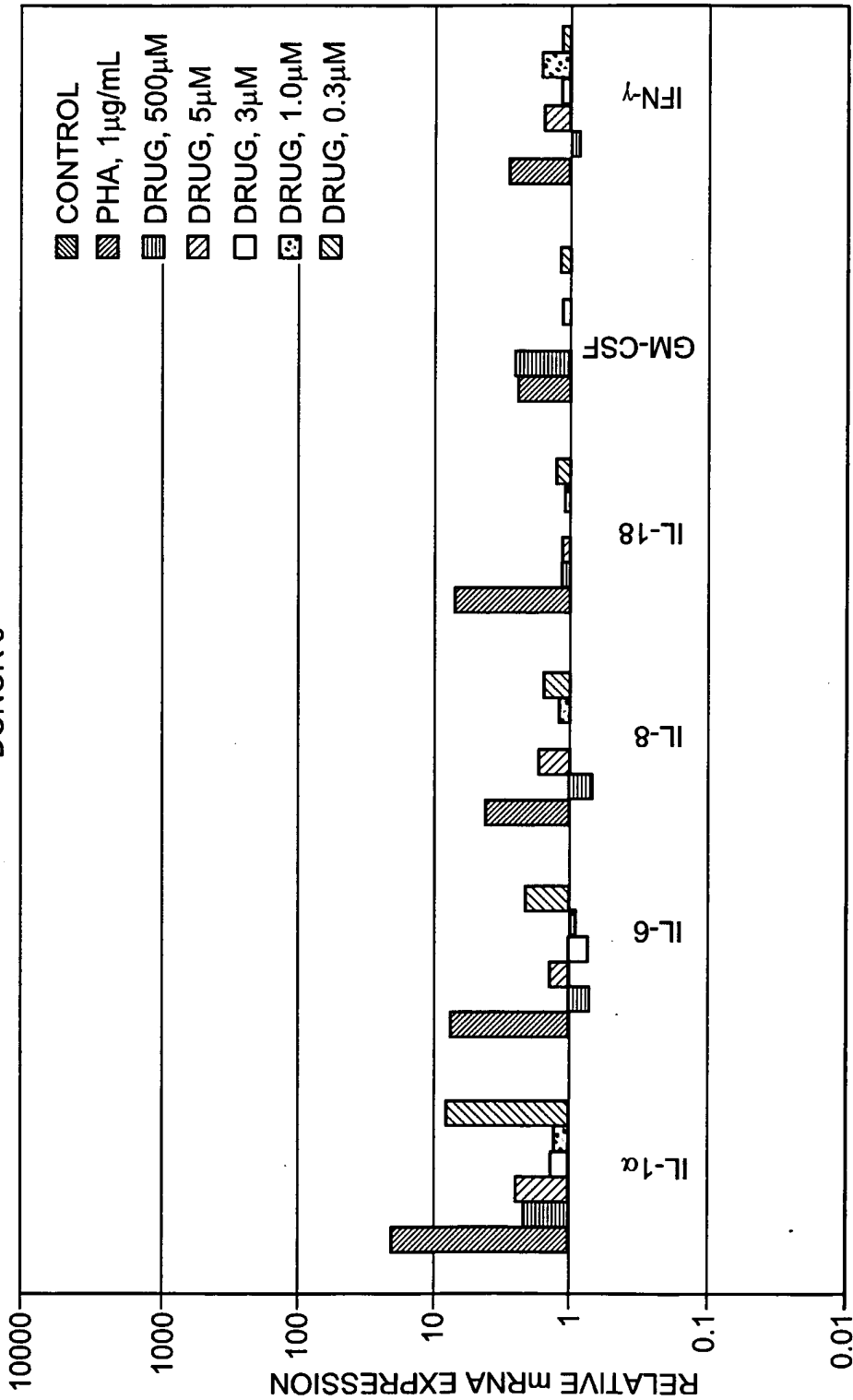


FIG. 18e

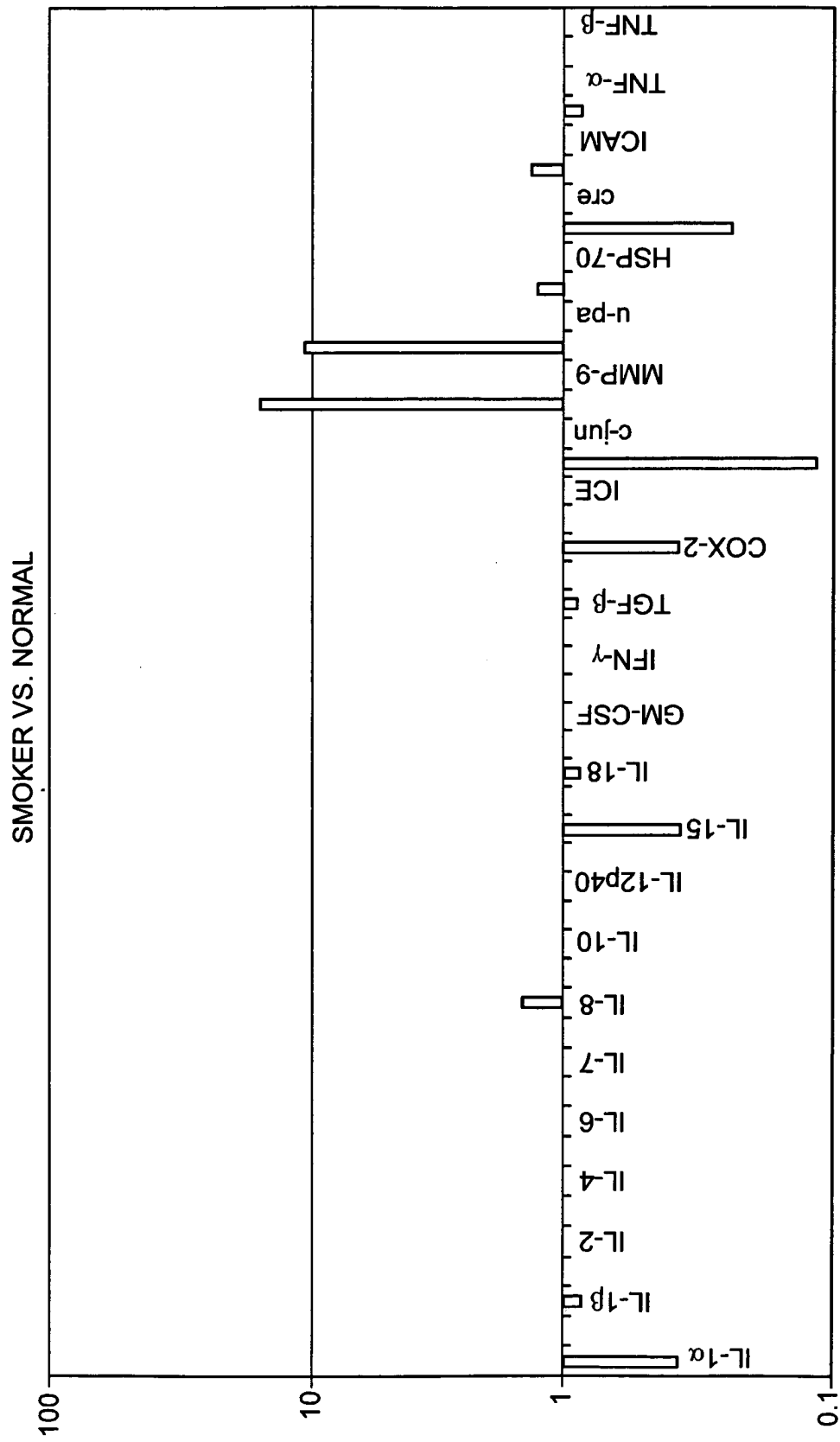


FIG. 19a

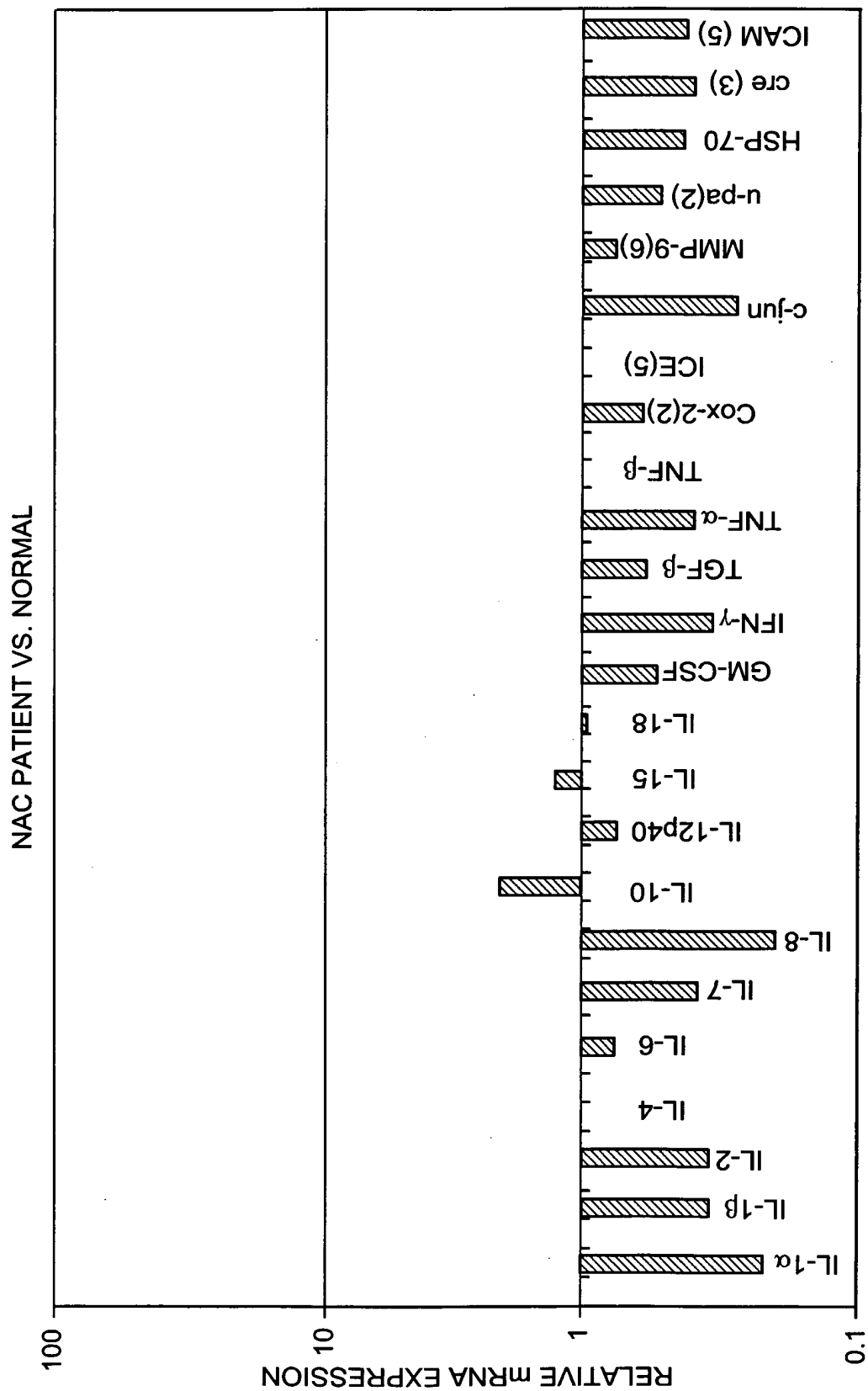


FIG. 19b

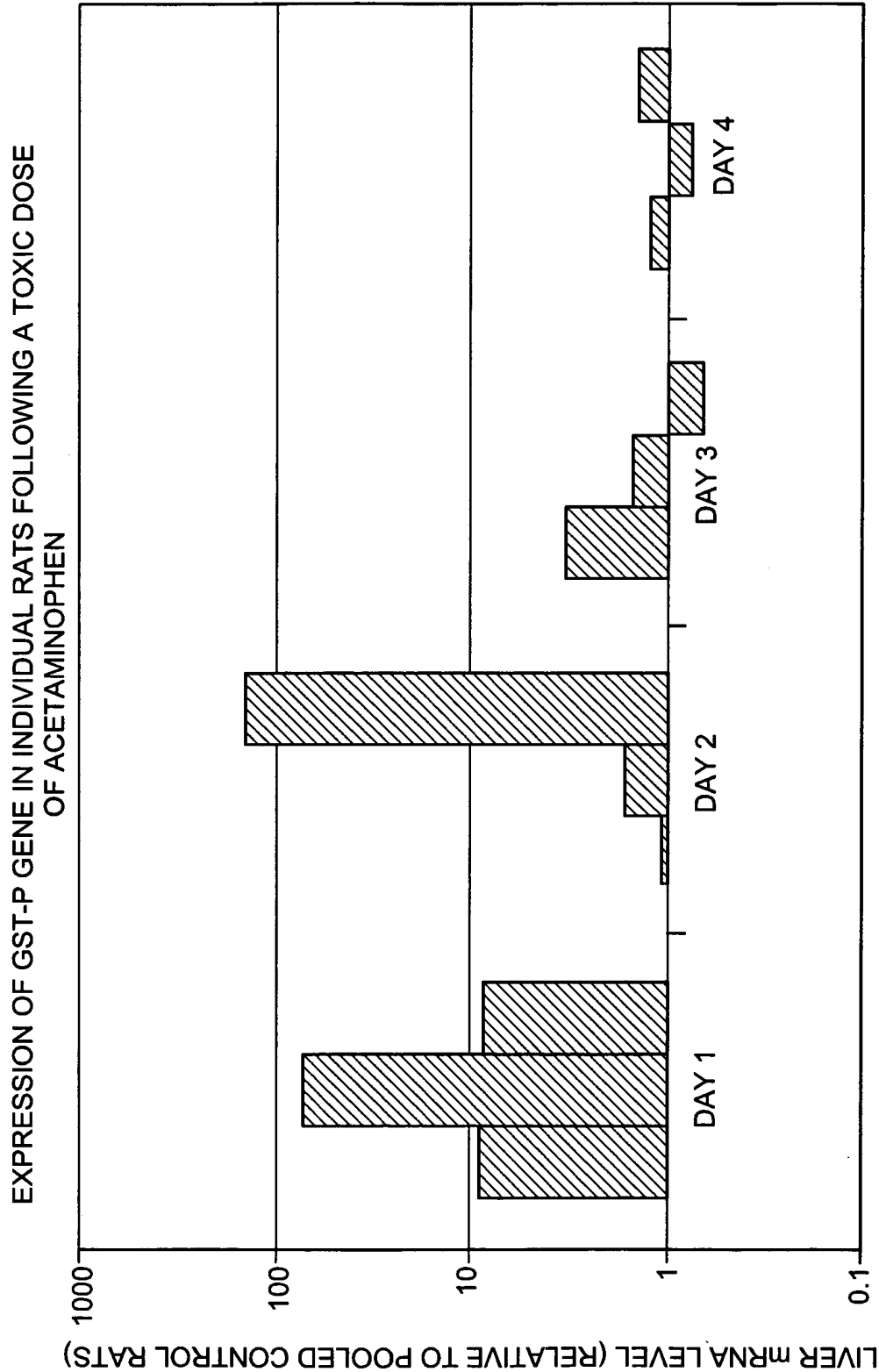


FIG. 20

COMPARATIVE HERBAL PROFILING SHOWS DIFFERENCES AMONG ANTI-INFLAMMATORY HERBS SUCH AS ECHINACEA, ARNICA AND SIBERIAN GINSENG

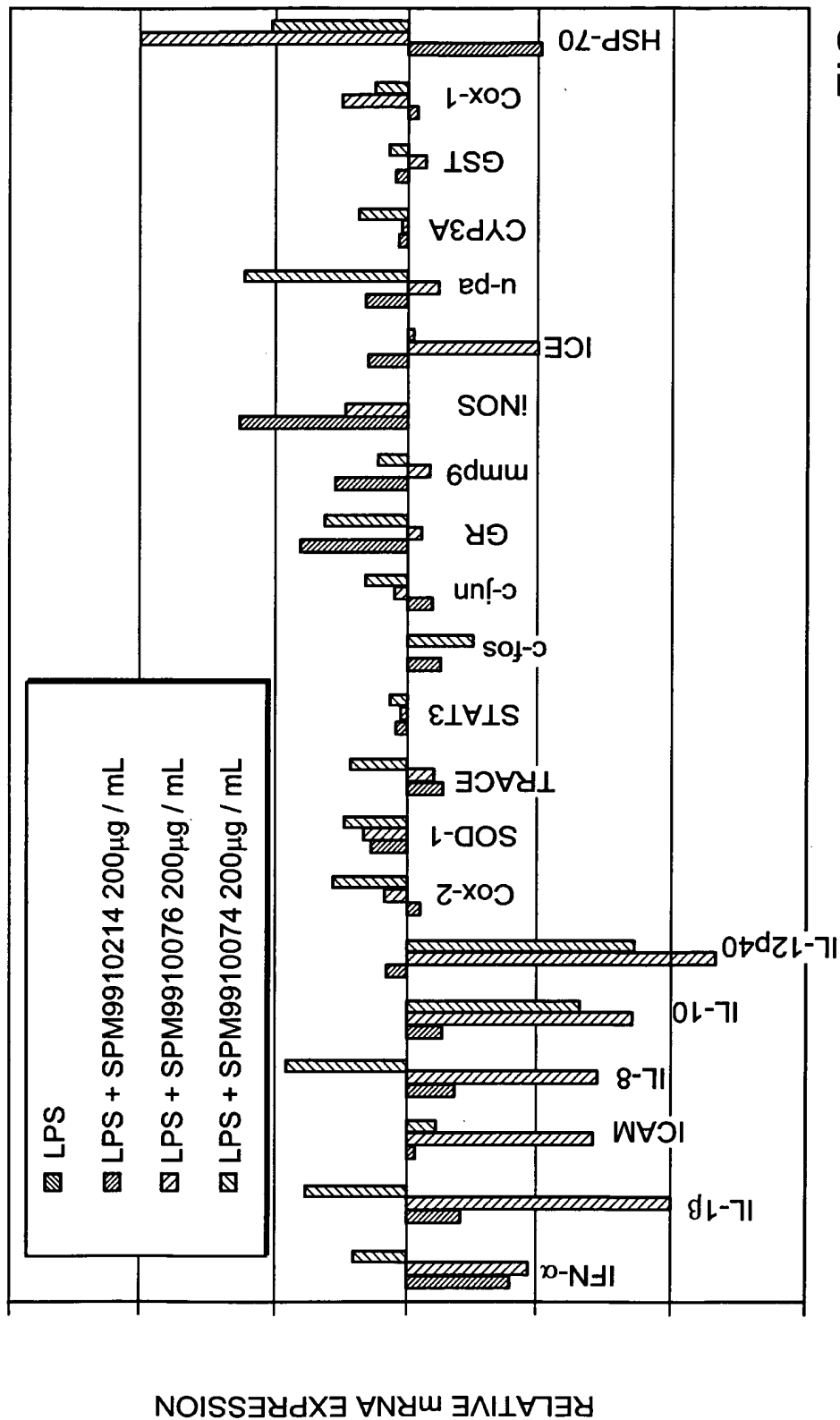


FIG. 21

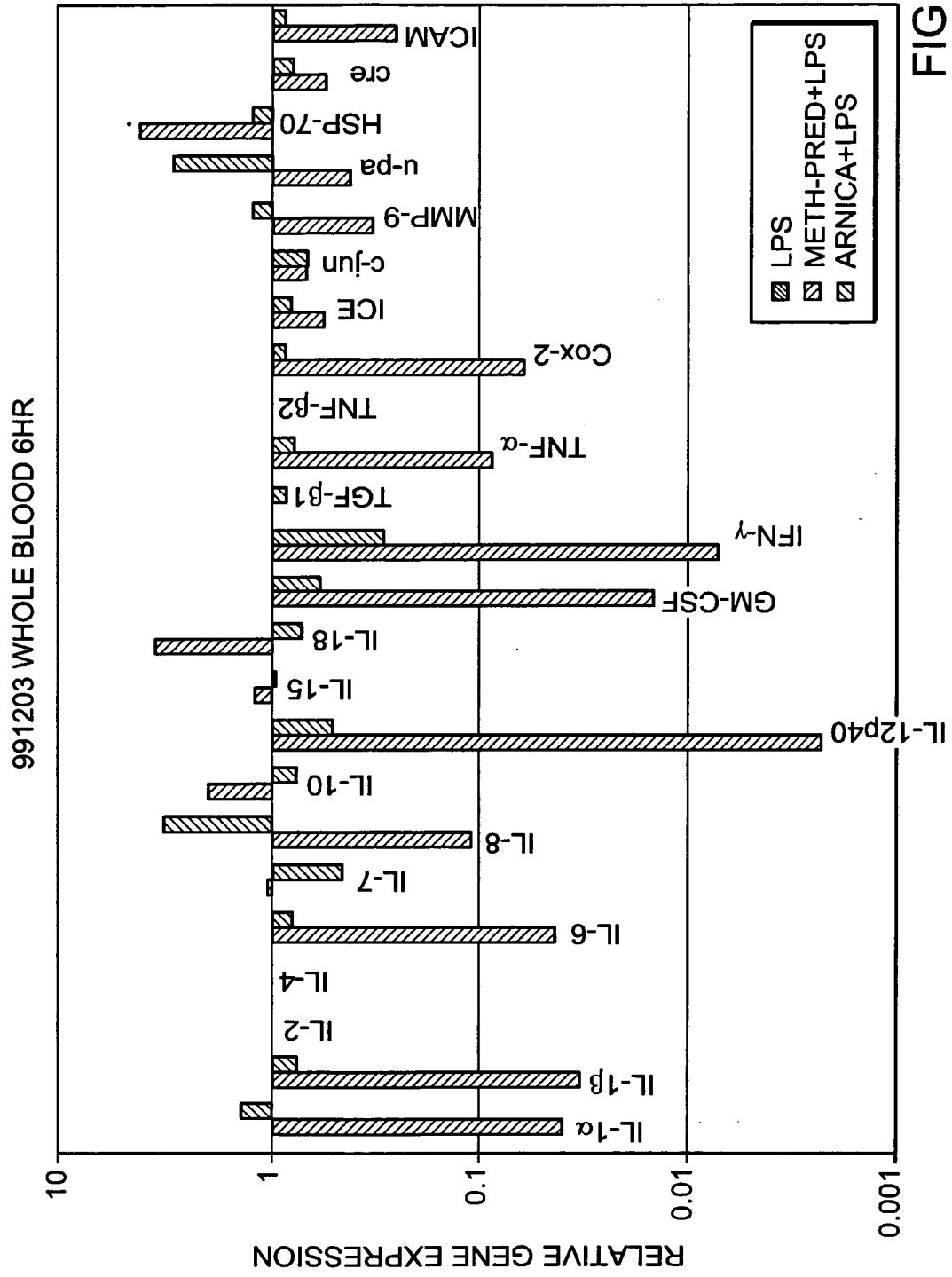


FIG. 22

SELECTED PROFILES CAN CORRELATE WITH A DOSE RESPONSE FOR A GIVEN HERBAL

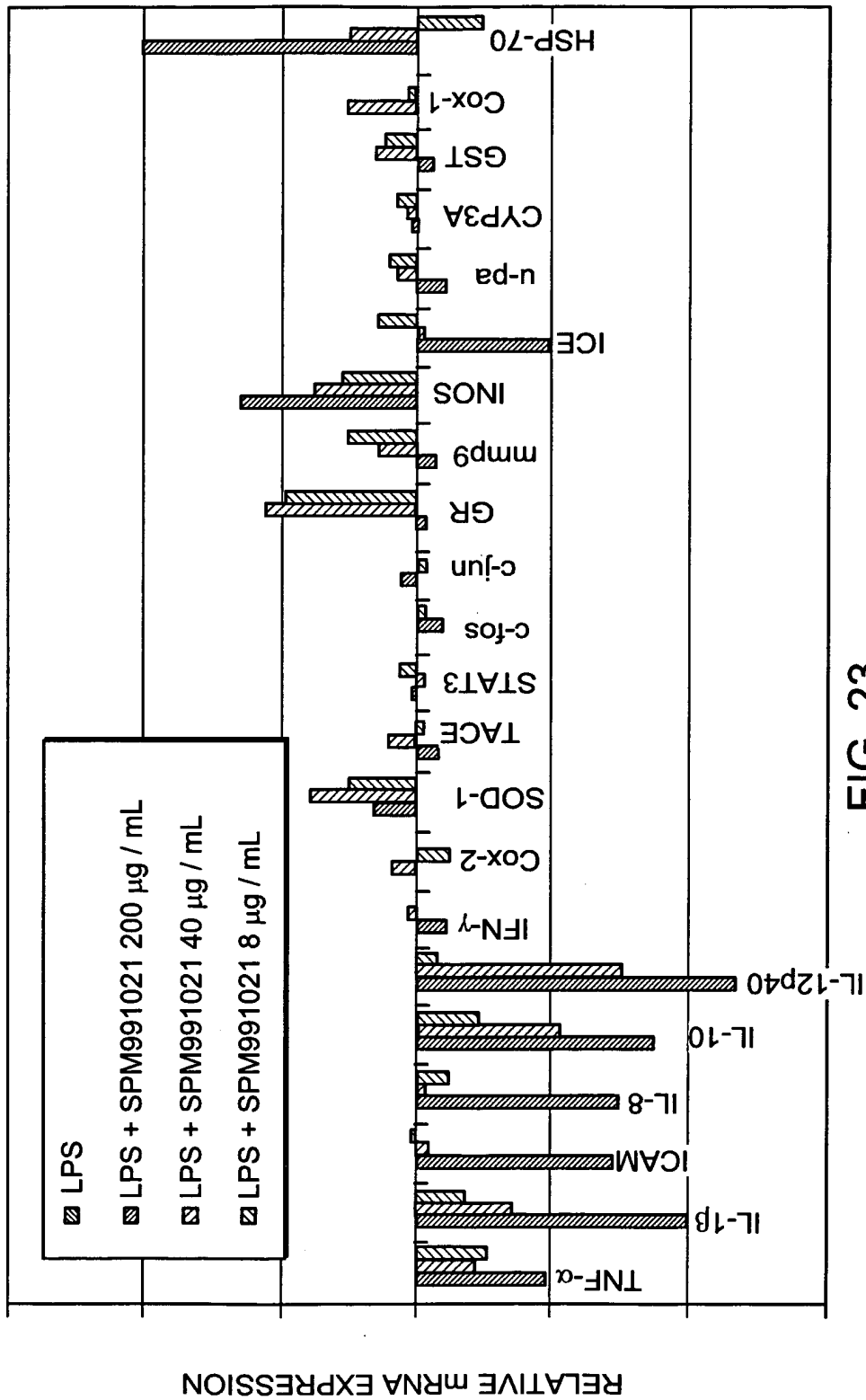


FIG. 23

SELECTED PROFILES REVEAL CONTAMINATION WITH ENDOTOXIN
AMONG DIFFERENT COMMERCIAL BRANDS AS REVEALED IN SPM010
AND SPM016

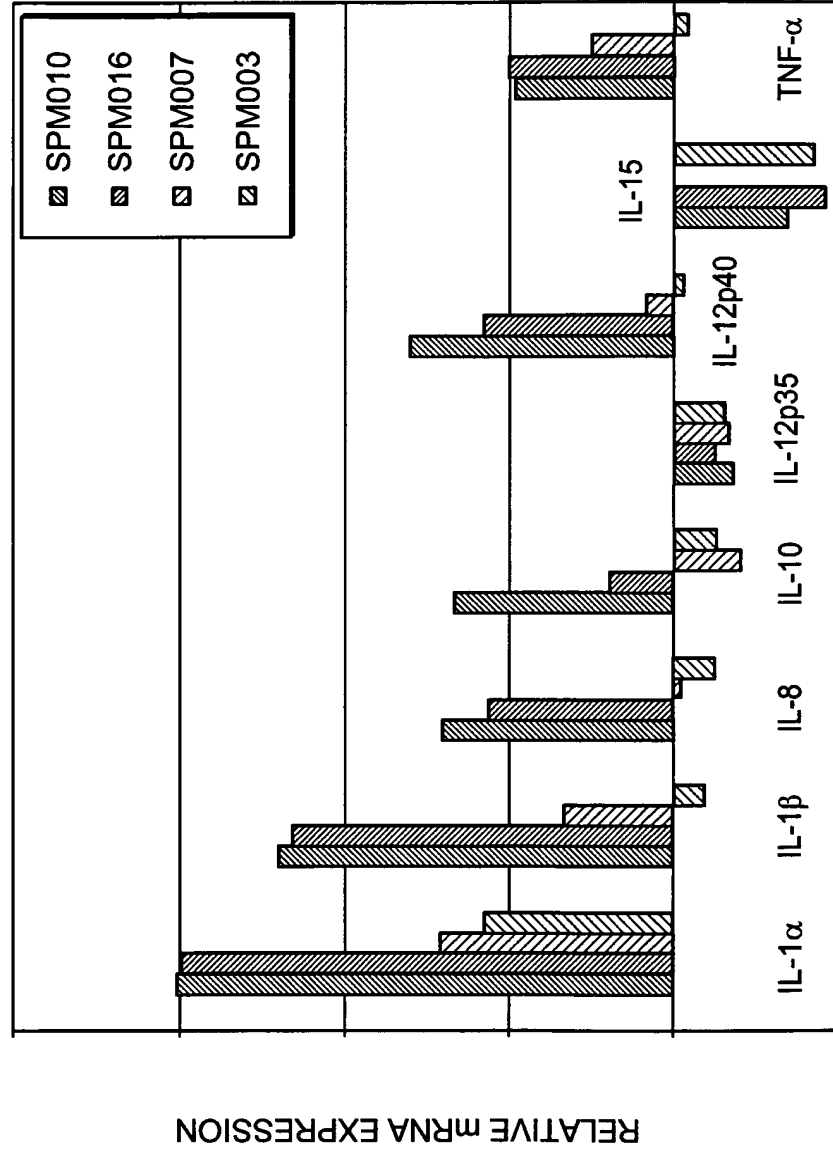


FIG. 24

HIGH DOSE COMPARISON OF UNSTIMULATED THP-1 CELL
TREATMENT WITH THREE HERBAL PREPARATIONS SHOWS SIGNIFICANT
VARIATION IN EFFICACY

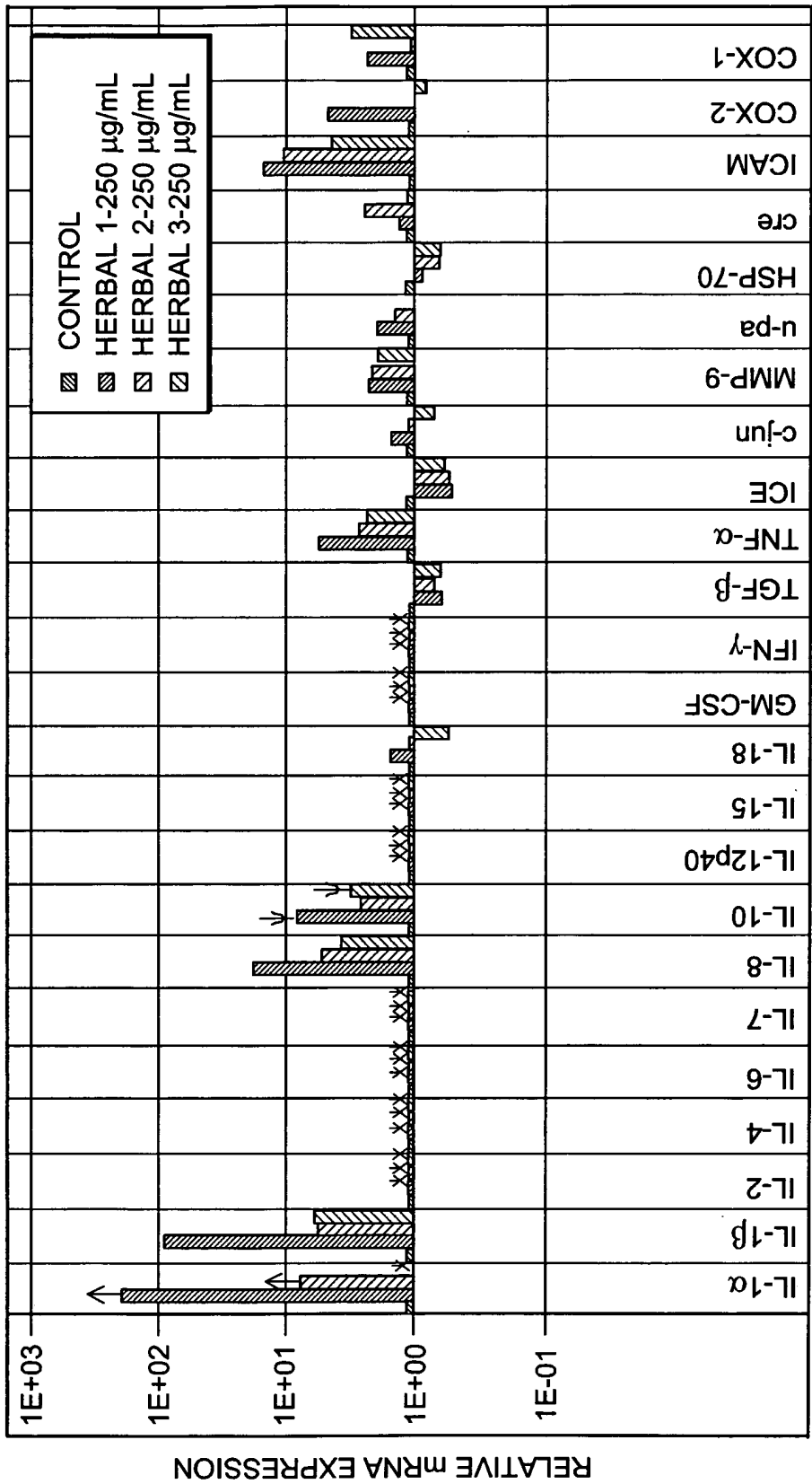


FIG. 25a

TREATMENT OF UNSTIMULATED THP-1 CELLS WITH A SINGLE
HERBAL SHOWS A NICE DOSE RESPONSE AMONG A SUBSET OF
GENES

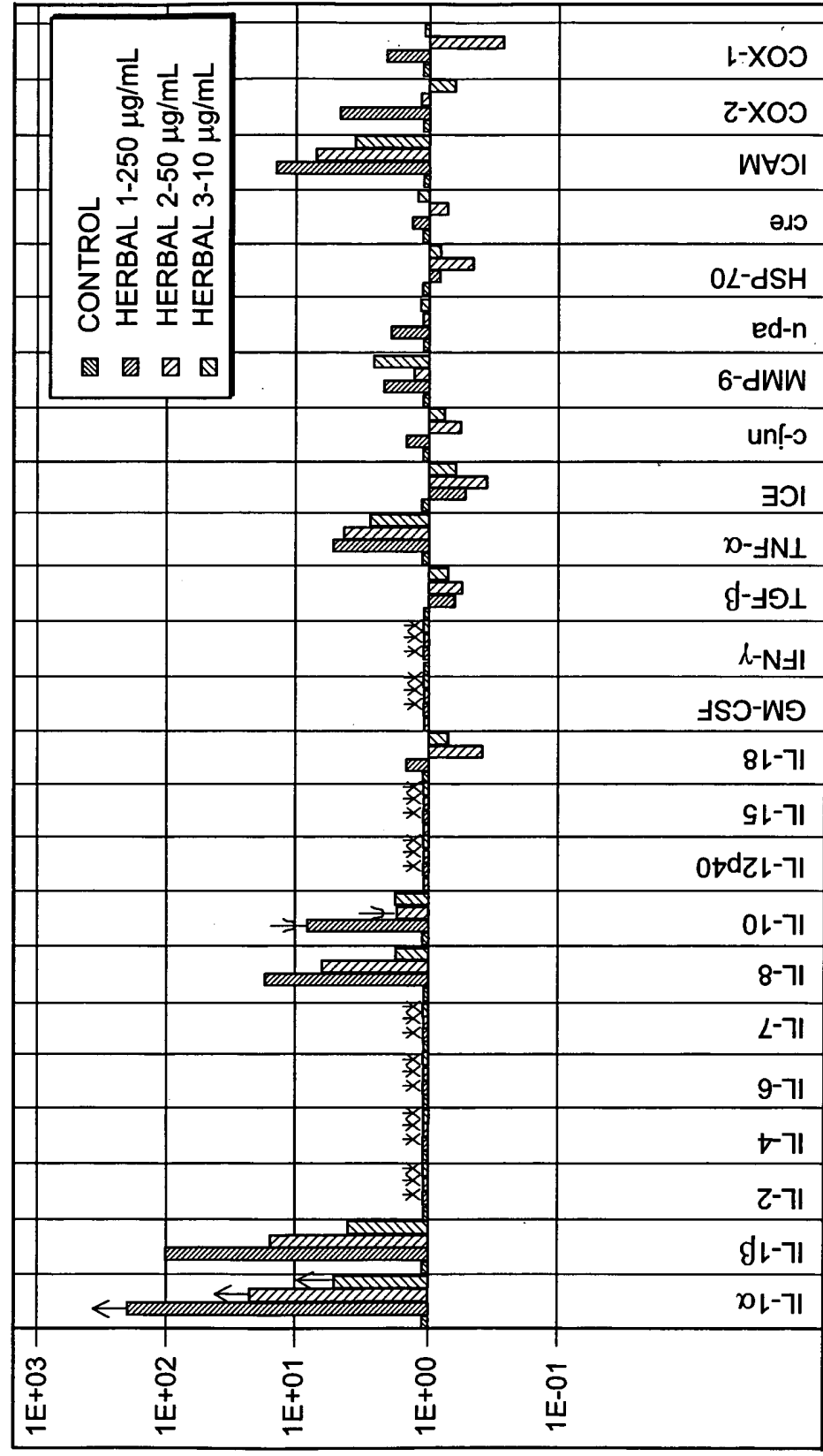


FIG. 25b

SELECTED PROFILES ALLOW FOR COMPARISON OF
COMMERCIAL ECHINACEAS (E1-E4)

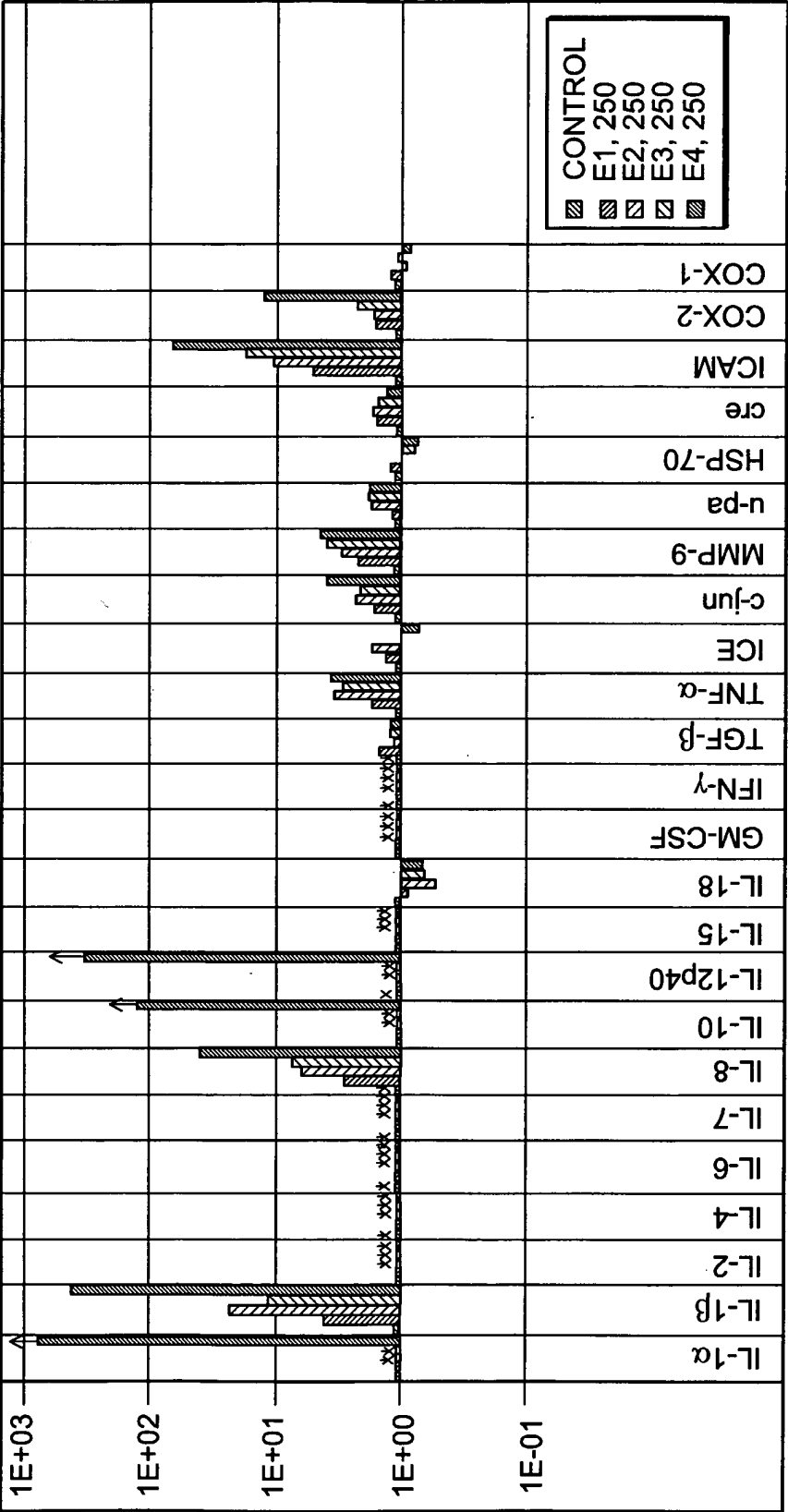


FIG. 25c

INFLAMMATION SELECTED PANEL SUBSET
DEMONSTRATES STEROID RESPONSE IN 3 DAY STUDY

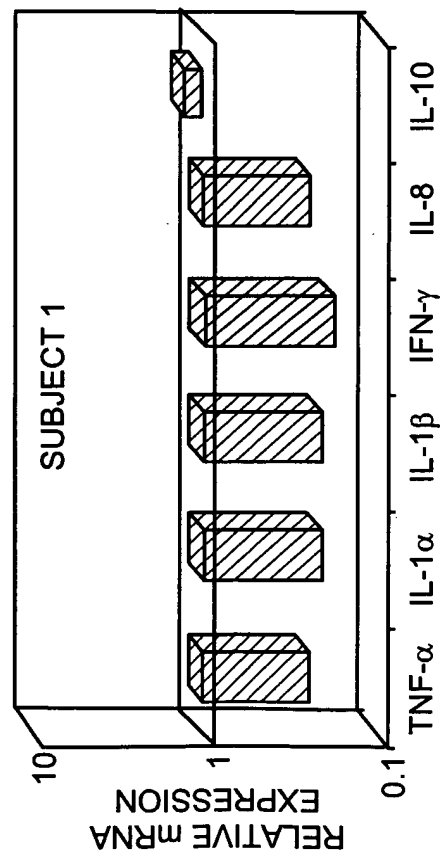


FIG. 26a

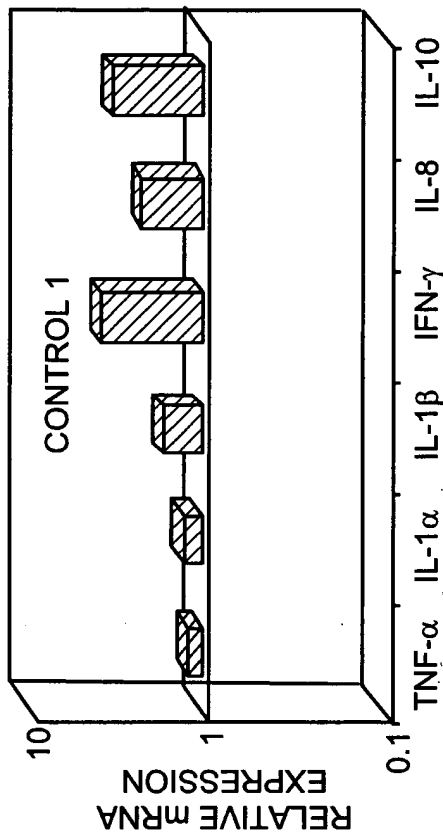


FIG. 26b

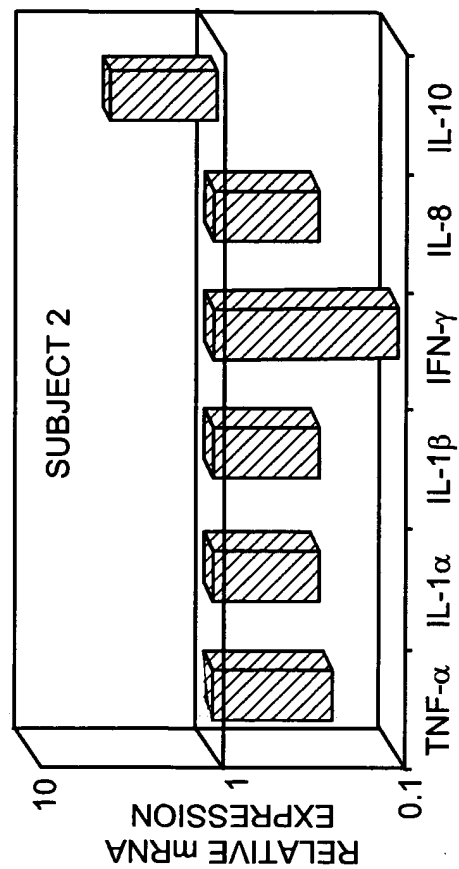


FIG. 26c

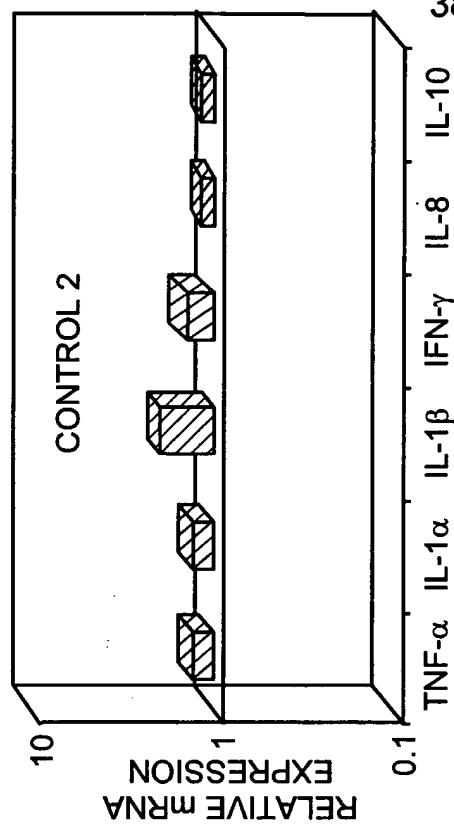


FIG. 26d

COMPARISON OF METHYLPREDNISONE AND HIGH-DOSE
IBUPROFEN IN PATIENTS USING INFLAMMATION SELECTED PANEL SUBSET

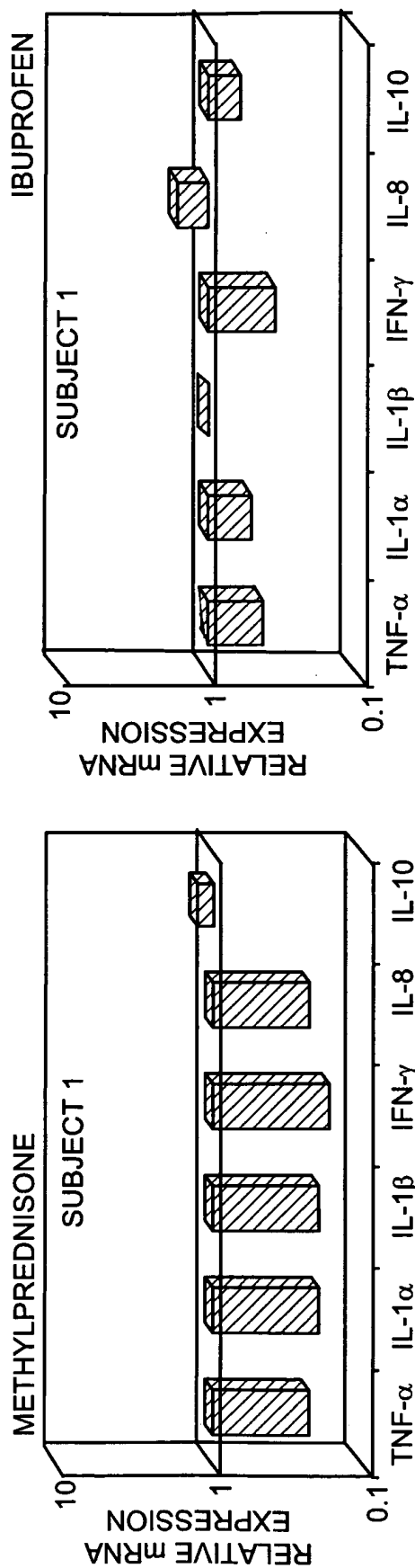


FIG. 27a
METHYLPREDNISONE

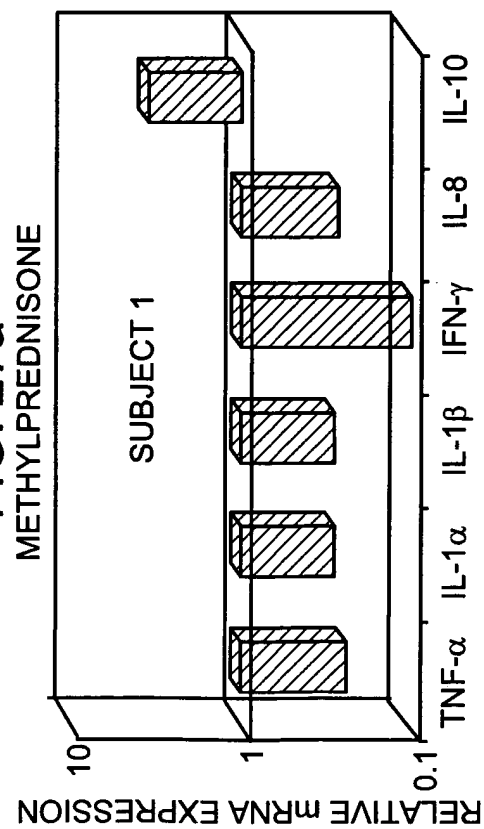


FIG. 27c

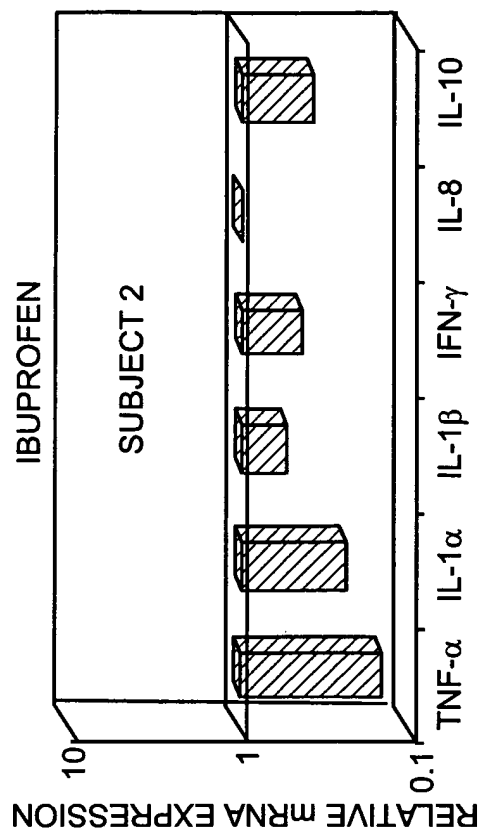


FIG. 27d

INFLAMMATION SELECTED PANEL SUBSET IDENTIFIES COPD PATIENTS

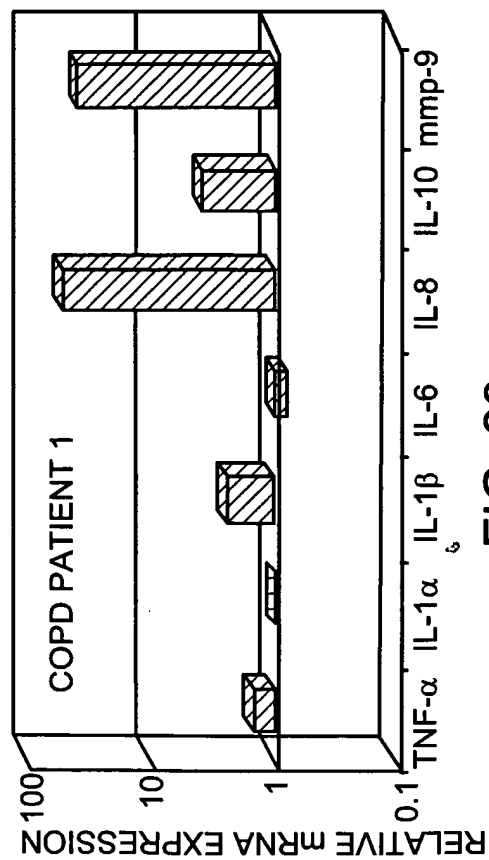


FIG. 28a

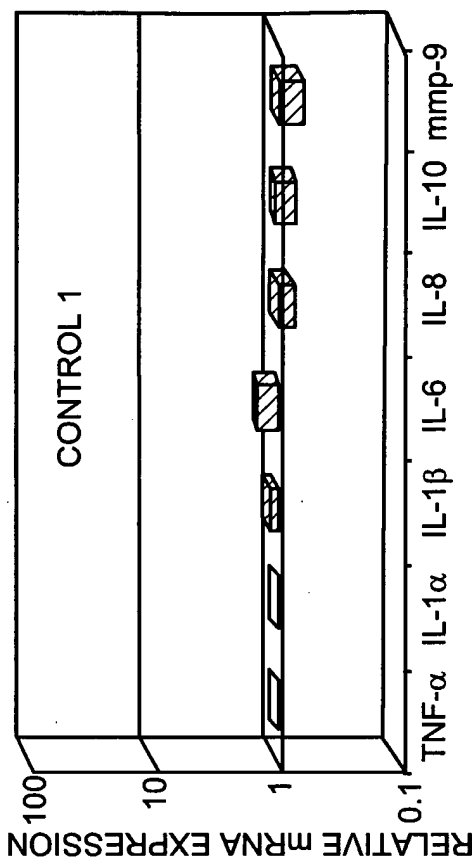


FIG. 28b

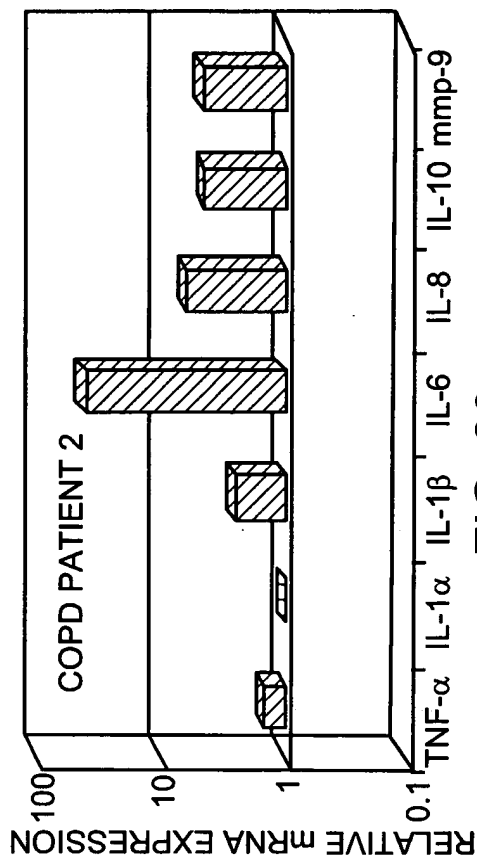


FIG. 28c

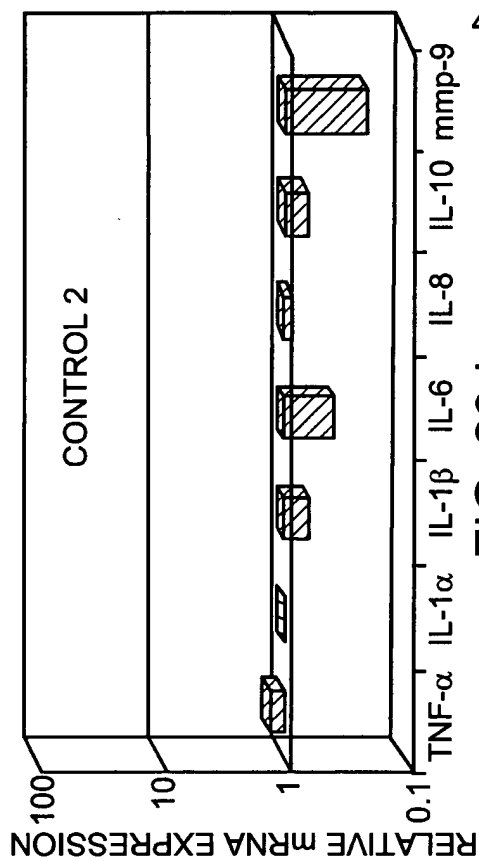


FIG. 28d

COMPARISON OF CALIBRATED PROFILE DATA SETS (USING INFLAMMATION SELECTED
PANEL SUBSET) AFTER IN-VITRO AND IN-VIVO DRUG EXPOSURE (STEROIDS)--STUDY 1

AUGUST 1999
SUBJECT 1JC

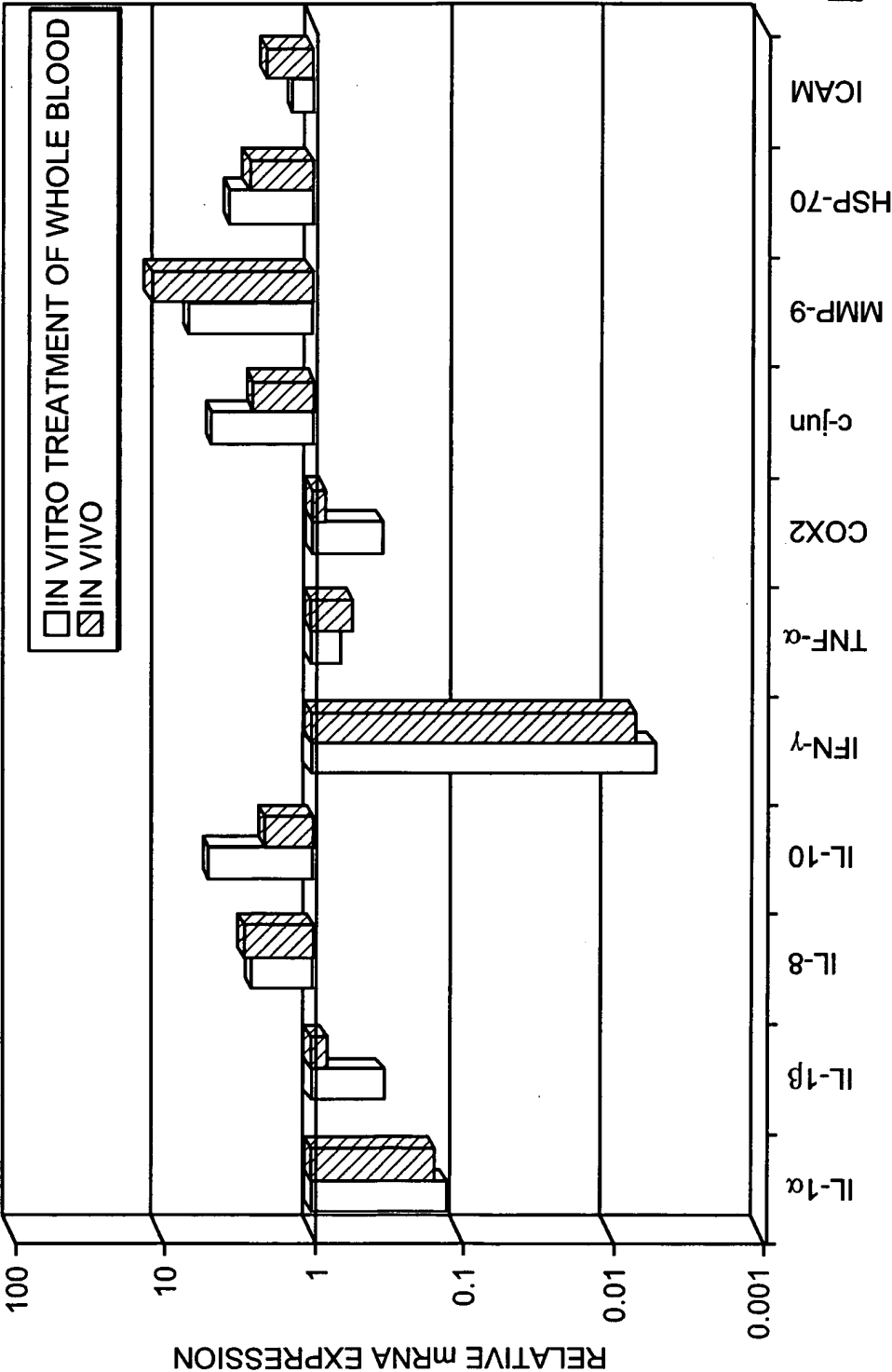


FIG. 29a

COMPARISON OF CALIBRATED PROFILE DATA SETS (USING INFLAMMATION SELECTED
 PANEL SUBSET) AFTER IN-VITRO AND IN-VIVO DRUG EXPOSURE (STEROIDS)--STUDY 2

AUGUST 2000
 SUBJECT 1JC

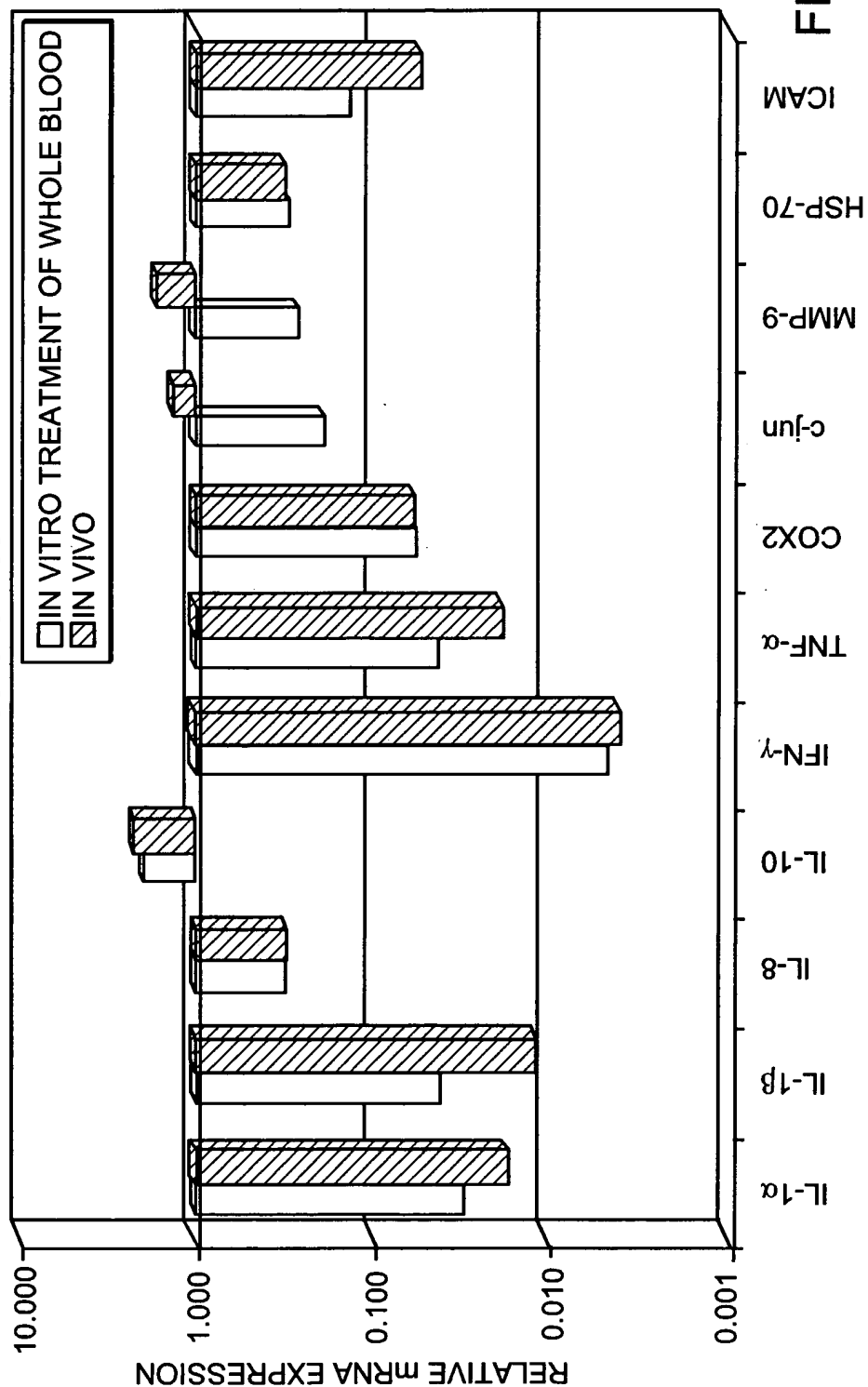
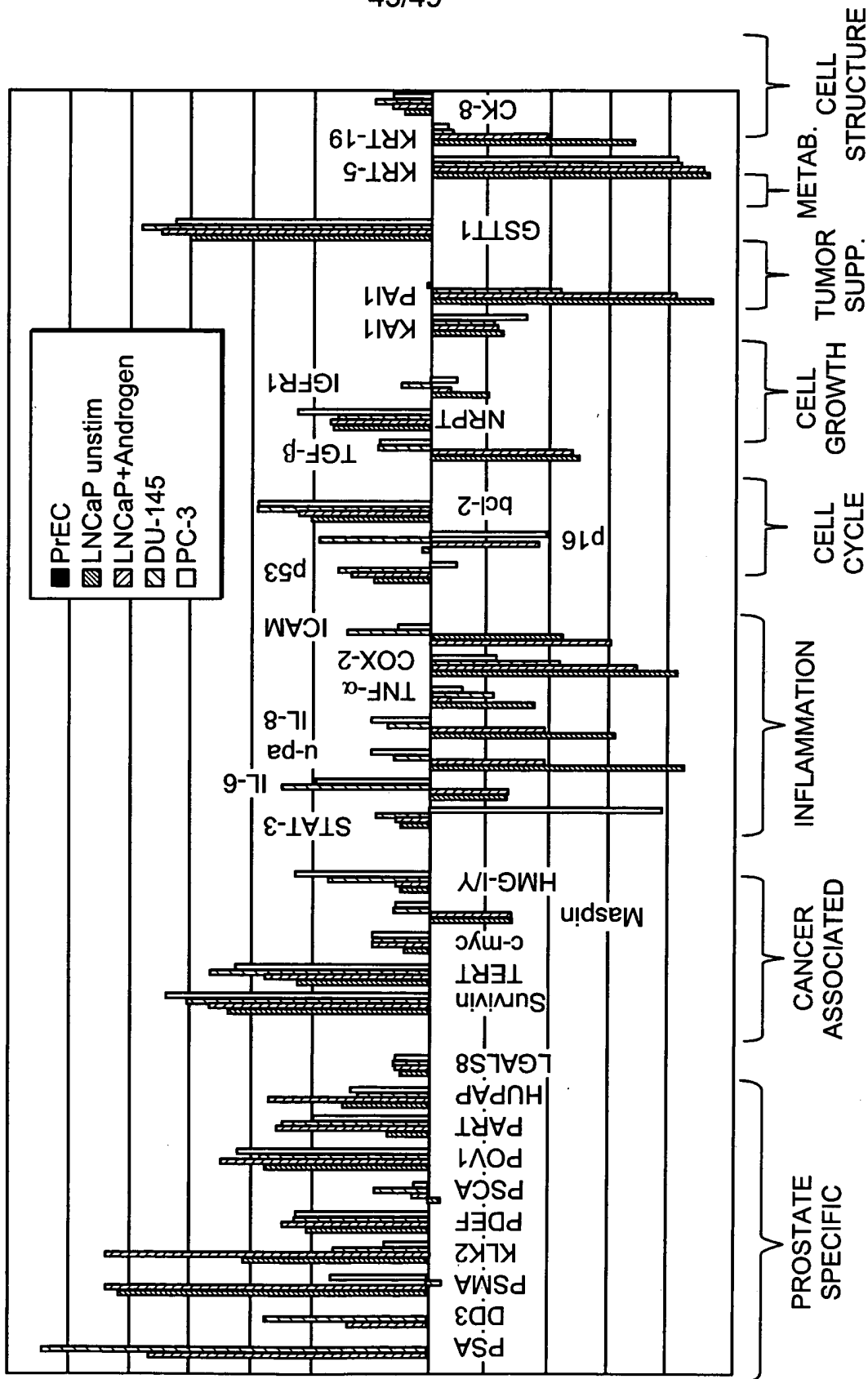


FIG. 29b

EFFECT OF DIFFERENT AGENTS EVALUATED USING A SUBSET OF THE SELECTED PROSTATE PANEL, AND SHOWING BROAD FUNCTIONS OF PANEL CONSTITUENTS

FIG. 30



EFFECT OF THE PHARMACEUTICAL CLOFIBRATE AS MEASURED ON RAT LIVER METABOLISM SELECTED PANEL

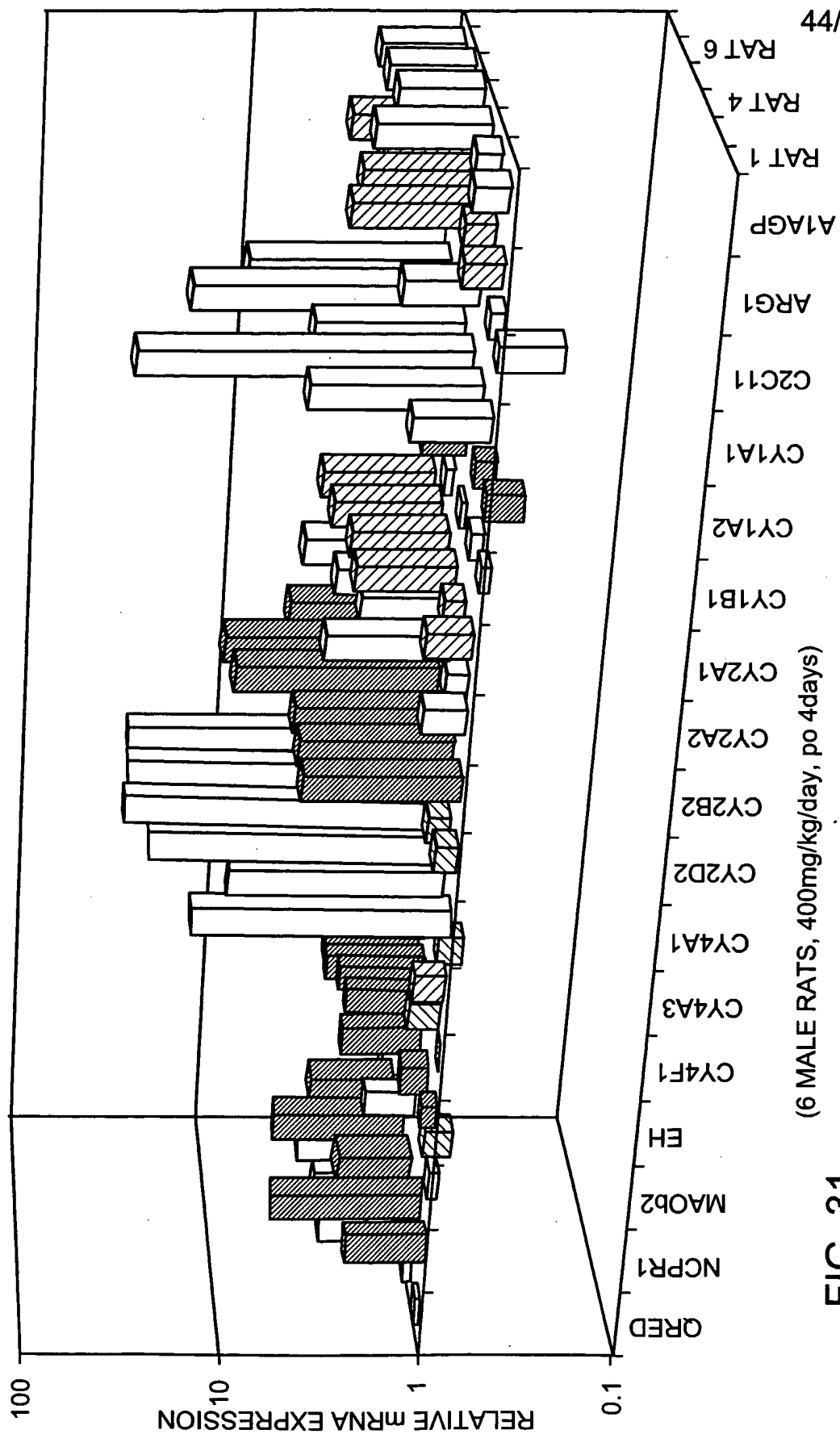


FIG. 31

A METABOLISM SELECTED PANEL DIFFERENTIATES DRUG RESPONSES IN RATS.

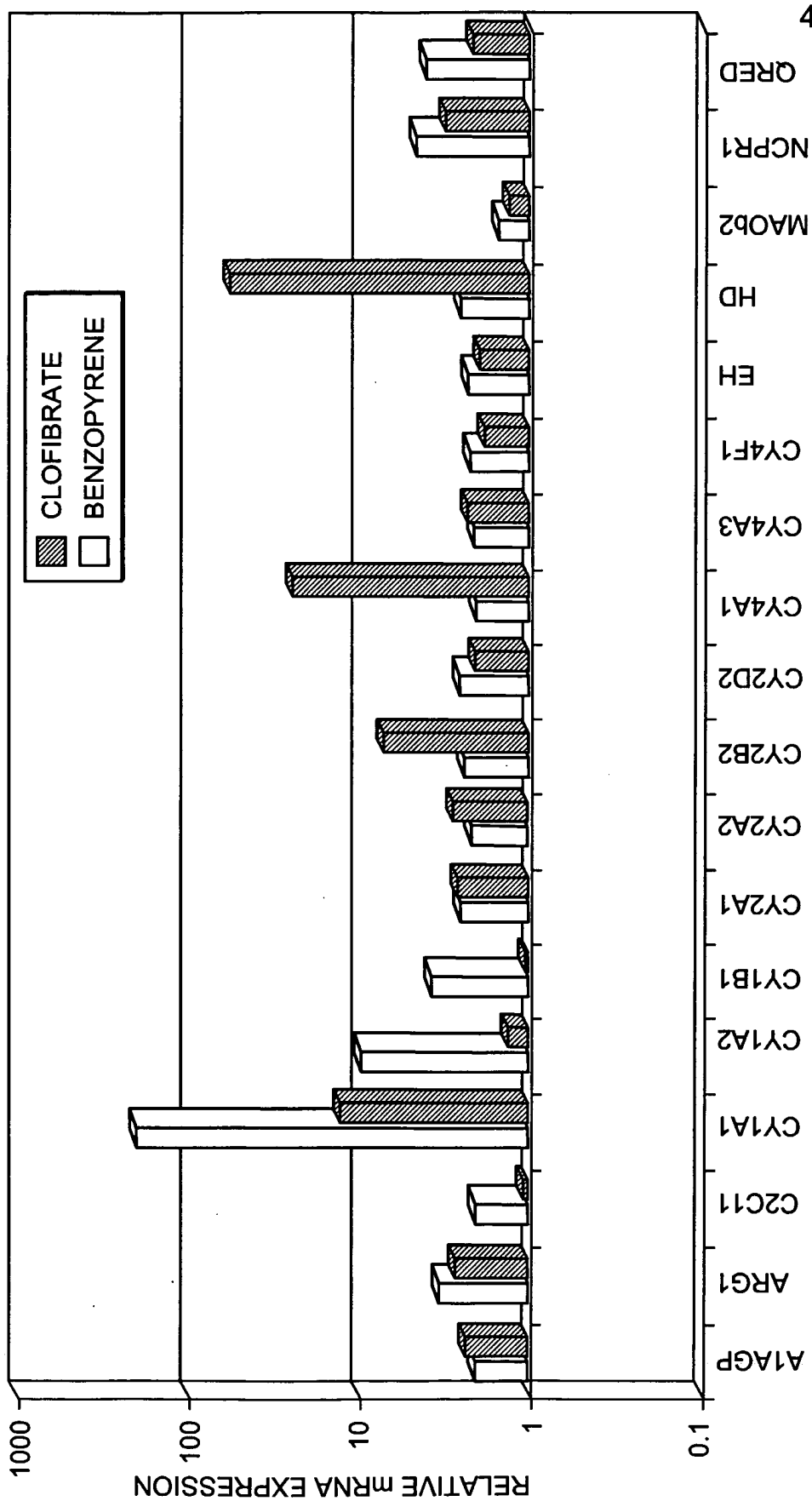


FIG. 32

A COMBINATION OF THE SKIN/EPITHELIAL AND VASCULAR SELECTED PANELS SHOW THE EFFECT OF ADMINISTRATION OF A STIMULANT.

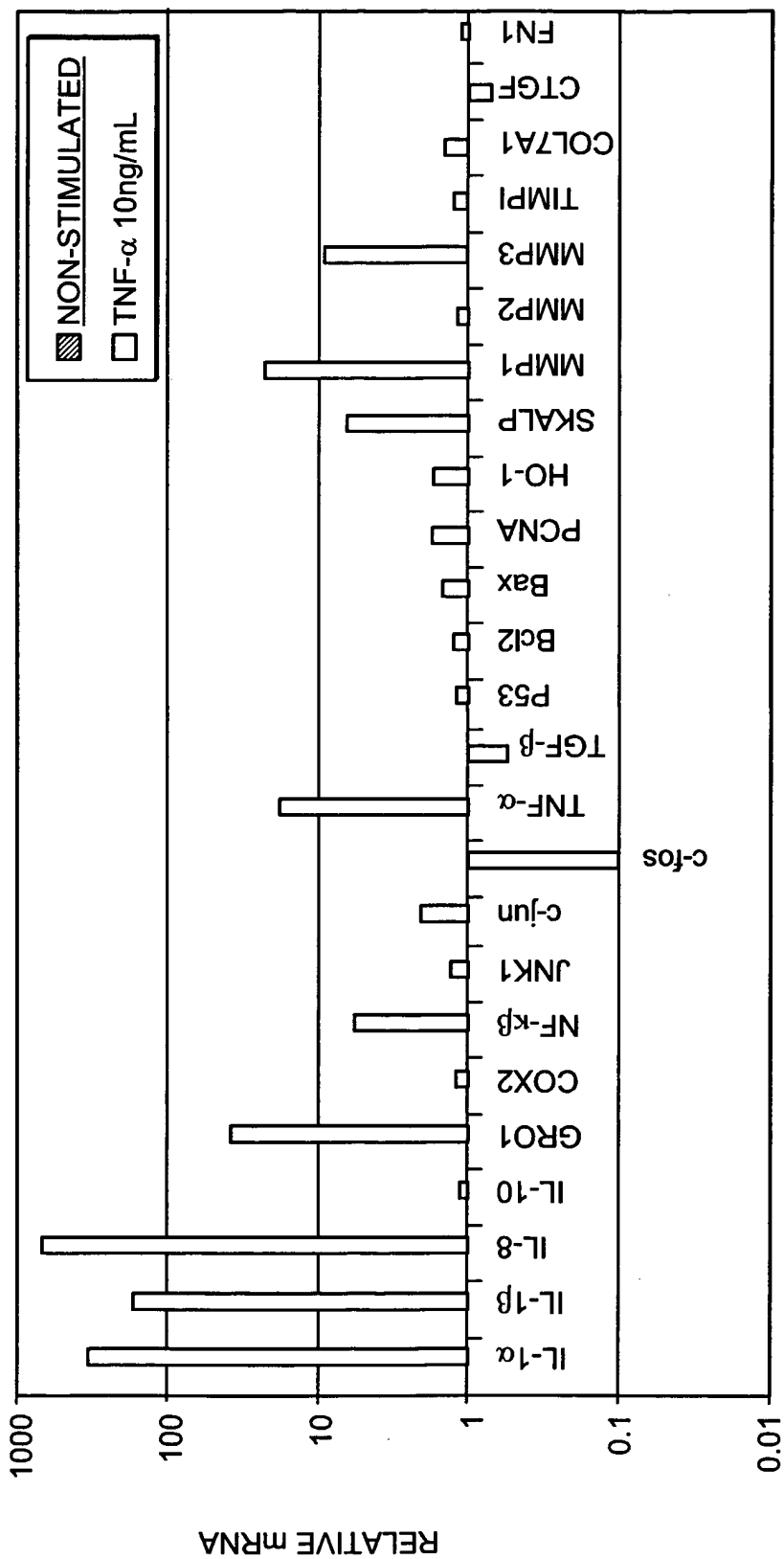


FIG. 33

EXAMPLE USE OF THE HUMAN LIVER SELECTED PANEL

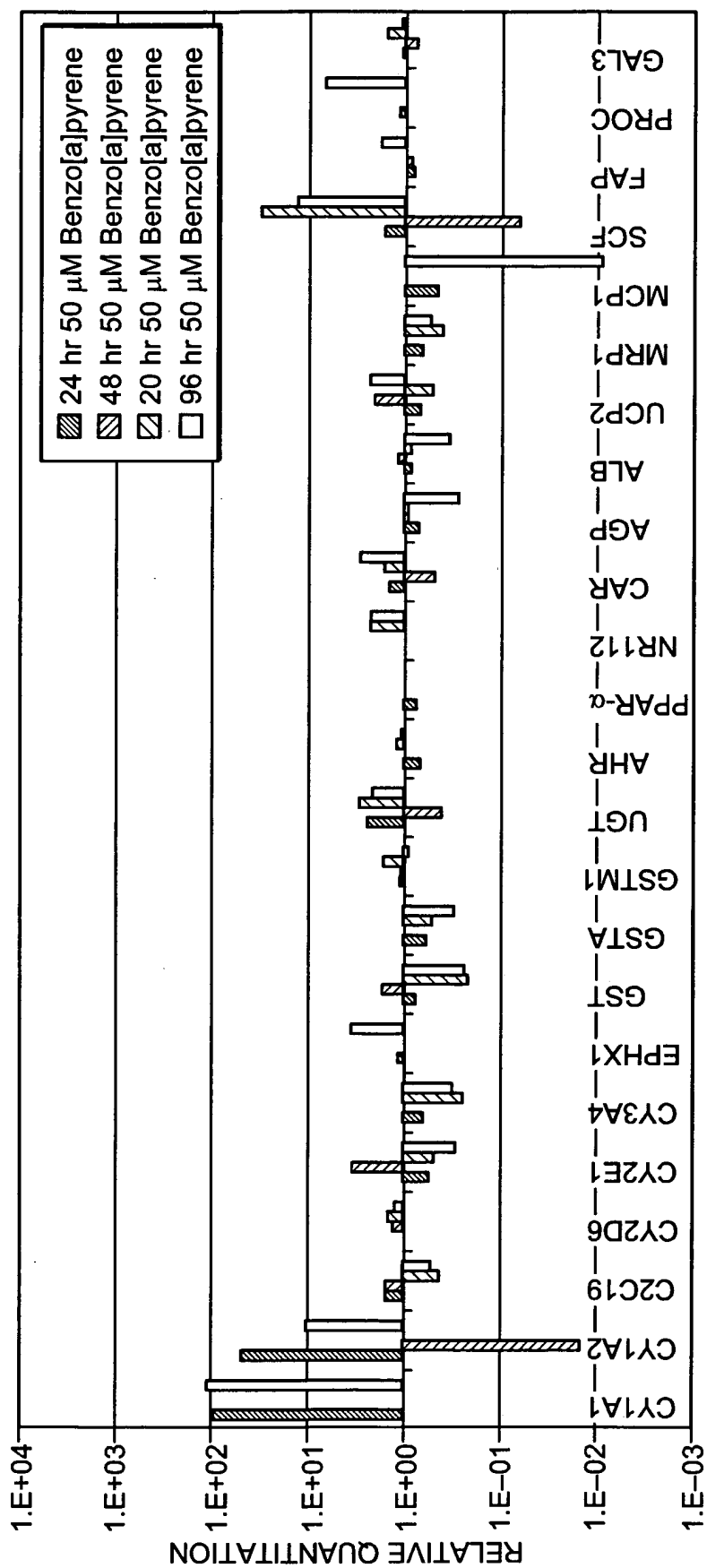


FIG. 34

HUMAN UMBILICAL VEIN CELLS TREATED WITH TNF- α AND ASSAYED ON THE VASCULAR SELECTED PANEL
 HUVEC STIMULATED WITH TNF- α , t = 24hr

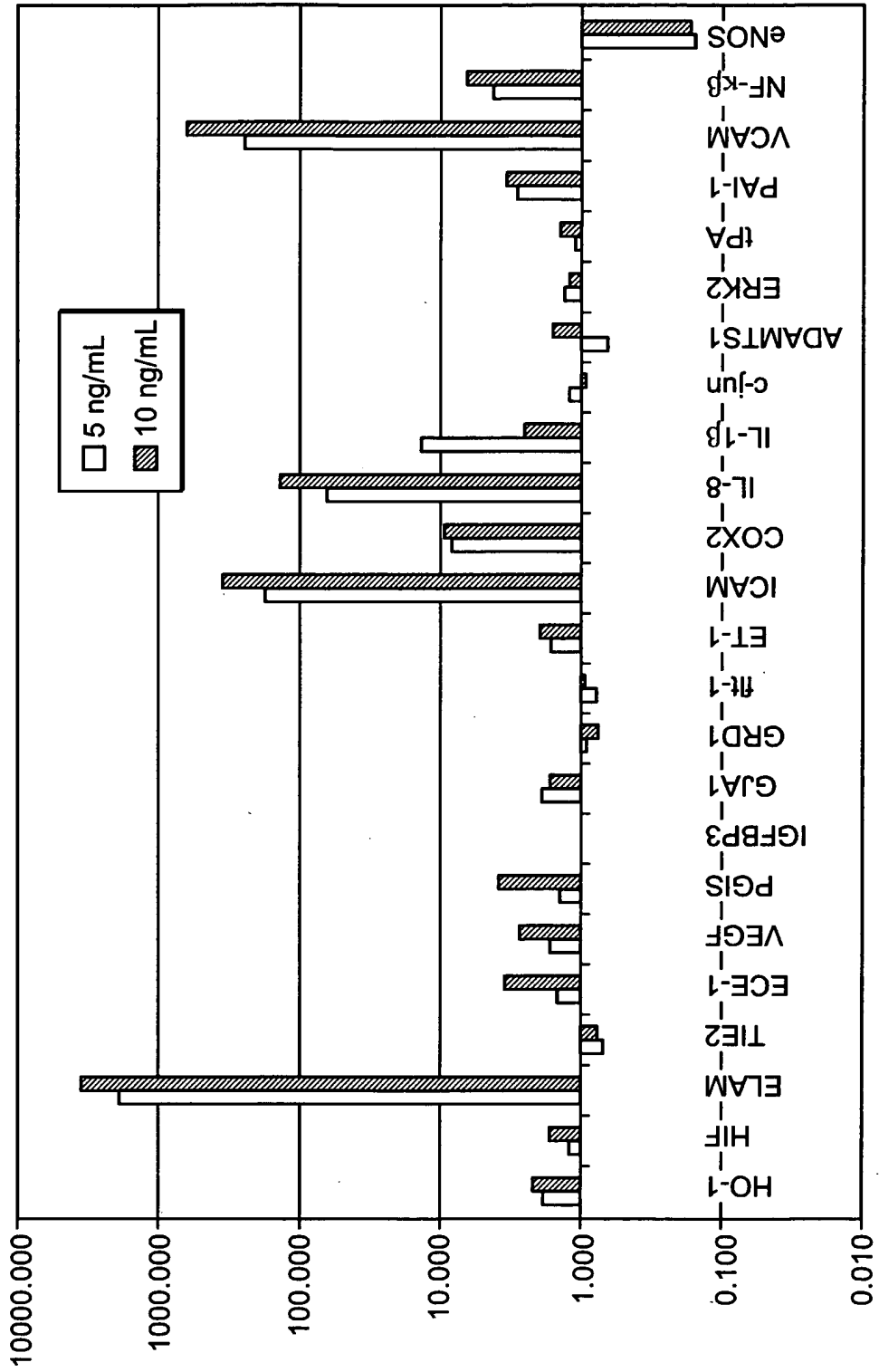


FIG. 35

ASSAY OF STIMULATED, HUMAN KERATINOCYTES ON THE SKIN SELECTED PANEL
EFFECTS OF N-ACETYLCYSTEINE ON UVB-STIMULATED KERATINOCYTES

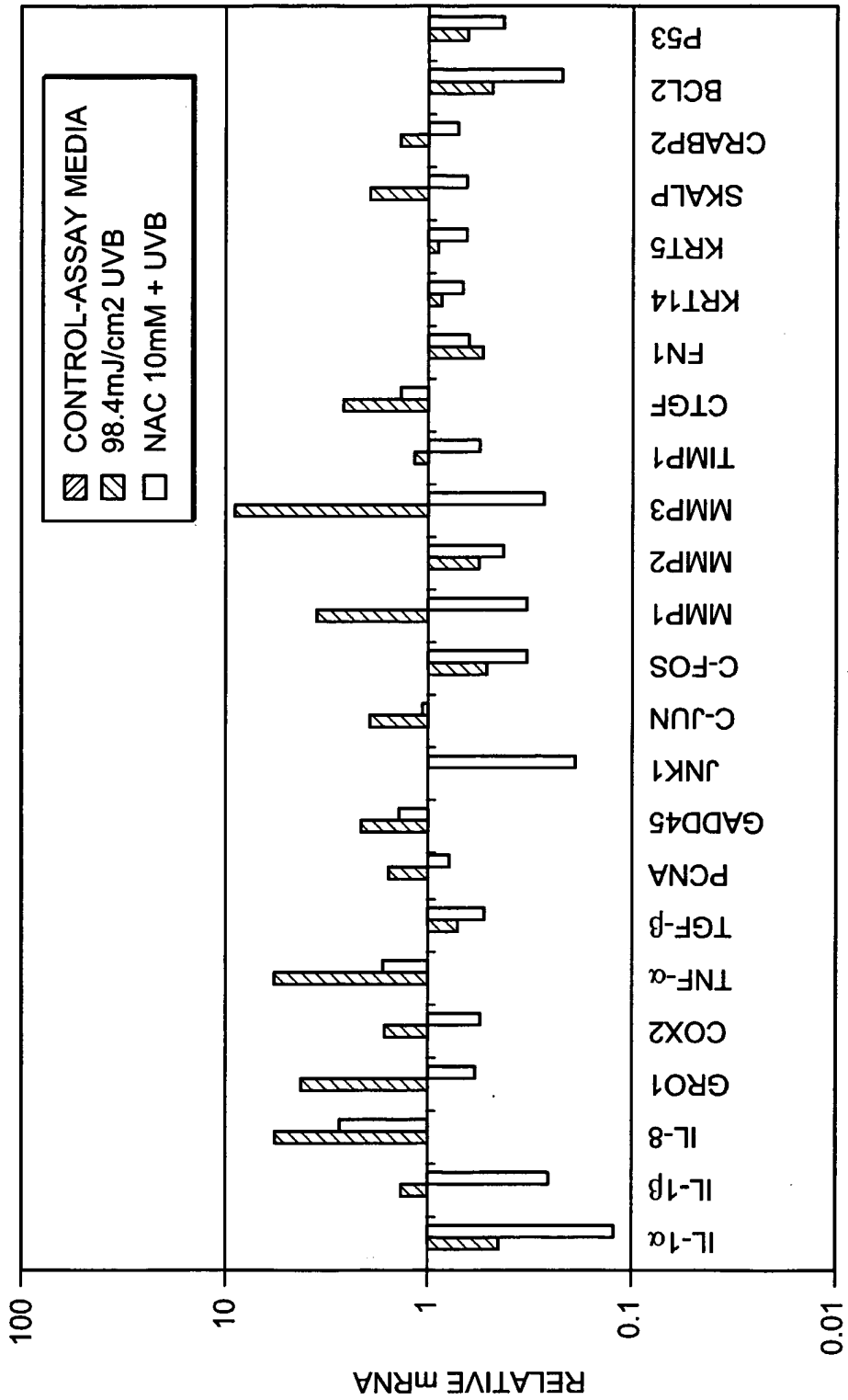


FIG. 36